LELAND STANFORD JUNIOR UNIVERSITY

REGISTER FOR 1915-16

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LELAND STANFORD JUNIOR UNIVERSITY

TWENTY-FIFTH
ANNUAL REGISTER
1915-16

"The beneficence of the Creator towards man on earth, and the possibilities of humanity, are one and the same."—LELAND STANFORD.

"A generous education is the birthright of every man and woman in America."
—DAVID STARR JORDAN

PUBLISHED BY THE UNIVERSITY
STANFORD UNIVERSITY, CALIFORNIA
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STANFORD UNIVERSITY
PRESS

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OFFICE DIRECTORY

[The rooms in the Inner Quadrangle are numbered consecutively, beginning at the left of the main entrance, ten numbers being allotted to each building. In the Outer Quadrangle forty numbers are allotted to each of the larger buildings and ten numbers to each one-story building, beginning with the Assembly Hall and number 120. The Engineering buildings south of the Quadrangles begin with number 500. The Chemistry building is on the west avenue between the Quadrangles and the Museum. Anatomy and Bacteriology and Immunity are in the Museum building.]

The administration offices are:

President, room 111.
Registrar, room 116.
Academic Secretary, room 112.
Appointment Secretary, room 118.
Medical Adviser to Men, Encina Gymnasium.
Medical Adviser to Women, room 94.
Dean of Women, room 203.
Student Adviser, room 264.
Treasurer, room 250.
Committee on Public Health, room 94.

The various Departmental offices are given in the Schedule and in the Directory of Officers and Students.

The University Post and Telephone Office is *Stanford University, California.*

The University Railway Station and Telegraph and Express Office is *Palo Alto, California.*

Requests for *Registers*, blanks and other printed matter, and inquiries regarding terms of admission, advanced standing, etc., should be addressed to The Registrar, *Stanford University, California.*

UNIVERSITY CALENDAR

1915

Aug. 30	Monday	Registration of Students.
Sept. 1	Wednesday	
Sept. 2	Thursday	Instruction begins in all Departments of the University.
Nov. 25	Thursday	Thanksgiving Recess.
Nov. 28	Sunday	
Dec. 11-17	Saturday-Friday	End-Semester Examinations at Stanford University.
Dec. 17	Friday	Work closes in the School of Medicine in San Francisco.

1916

Jan. 10-11	Monday-Tuesday	Registration of Students.
Jan. 12	Wednesday	Instruction begins in all Departments of the University.
Jan. 22	Saturday	Inauguration of President Wilbur.
Feb. 22	Tuesday	Washington's Birthday.
March 9	Thursday	Founders' Day.
April 1	Saturday	Mid-Semester Recess.
April 9	Sunday	
May 11-17	Thursday-Wednesday	End-Semester Examinations at the University.
May 14	Sunday	Birthday of Leland Stanford Junior.
May 17	Wednesday	Work closes in the School of Medicine in San Francisco.
May 21	Sunday	Baccalaureate Sunday.
May 22	Monday	Commencement.

Aug. 28	Monday	Registration of Graduate Students.
Aug. 29	Tuesday	Registration of Undergraduates.
Aug. 30	Wednesday	
Aug. 31	Thursday	Instruction begins.
Dec. 14-20	Thursday-Wednesday	End-Semester Examinations.

ADMINISTRATIVE OFFICERS

THE BOARD OF TRUSTEES

[The figures in parentheses indicate year of beginning of service.]

FRANK BARTOW ANDERSON (1912), California and Sansome, San Francisco
RALPH ARNOLD, PH. D. (1915), 917 Union Oil Bldg., Los Angeles
WILLIAM BABCOCK (1905), San Rafael
HORACE DAVIS, LL. D. (1885), 1800 Broadway, San Francisco
CHARLES PARMELEE EELLS, A. B. (1905), 2415 Pierce st., San Francisco
JOSEPH DONOHOE GRANT, A. B. (1891), 2200 Broadway, San Francisco
HERBERT CLARK HOOVER, A. B. (1912), 604 Mills Bldg., San Francisco
TIMOTHY HOPKINS (1885), (Nevada Bank Bldg., S. F.), Menlo Park
SAMUEL FRANKLIN LEIB, LL. B. (1891), First Ntl. Bank Bldg., San Jose
FRANK MILLER (1893), 28 Hillcrest rd., Berkeley
WILLIAM MAYO NEWHALL, B. S. (1912), 260 Calif. st., San Francisco
JAMES LEROY NICKEL (1909), Merchants Exchange Bldg., San Francisco
LEON SLOSS (1891), 310 Sansome st., San Francisco
THOMAS WELTON STANFORD (1893), 142 Russell st., Melbourne, Aus.
VANDERLYNN STOW, A. B. (1906), 2900 Broadway, San Francisco

OFFICERS OF THE BOARD

President: WILLIAM MAYO NEWHALL.
Vice-President: CHARLES PARMELEE EELLS.
Treasurer and Business Manager: VANDERLYNN STOW.
Assistant Treasurer: FRANK MILLER.
Secretary: LEON SLOSS.

STANDING COMMITTEES OF THE BOARD

Finance: SLOSS, ANDERSON, BABCOCK, LEIB, MILLER, NEWHALL, NICKEL, STOW.
University: ARNOLD, DAVIS, EELLS, GRANT, HOOVER, HOPKINS, NEWHALL, STANFORD, STOW.
Library: HOPKINS, DAVIS, EELLS, NEWHALL, STOW.
Rules: DAVIS, EELLS, HOOVER, NEWHALL, SLOSS.
Museum: BABCOCK, LEIB, STOW.
Grounds: NEWHALL, SLOSS, STOW.
Church: MILLER, LEIB, STOW.

THE FACULTY

[Office and office hours in parentheses; MTWThF unless otherwise specified.]

Chancellor: DAVID STARR JORDAN. (425, 3-5.)

President: †JOHN CASPER BRANNER. (332, 10-12; 111, 3-5.)
‡RAY LYMAN WILBUR. (111, 10-12, 3-5.)

Vice-President: JOHN MAXSON STILLMAN. (44c, 2-4.)

Registrar: ORRIN LESLIE ELLIOTT. (117, 8:15-12:15, 1:30-4:30, S 9-12.)

Librarian: GEORGE THOMAS CLARK. (Library, 8:30-12:15, 1:30-4:30)

Academic Secretary: GEORGE ARCHIBALD CLARK. (112, 9-12, 2:30-5.)

Dean of Women: EVELYN WIGHT ALLAN. (203, MTWThF 10:15-12:15, Th 3-6 at 31 Salvatierra.)

Student Adviser: OTIS HENRY CASTLE. (264, 11:15-12:15, 2:30-4:30.)

Chaplain: DAVID CHARLES GARDNER. (Vestry, TWThF 9-12.)

Appointment Secretary: SUSAN BROWN BRISTOL. (118, 9-12, 1:30-4:30, S 9-12.)

Medical Adviser for Women: CLELIA DUEL MOSHER. (94, MWTF 1-2, T 1-1:30.)

Medical Adviser for Men: HERBERT ROWELL STOLZ. (Encina Gymnasium, 9-12.)

DEPARTMENT EXECUTIVES

[Office in parentheses.]

Anatomy: ARTHUR WILLIAM MEYER. (7m.)

Applied Mathematics: LEANDER MILLER HOSKINS. (275.)

Bacteriology and Immunity: WILFRED HAMILTON MANWARING. (15m.)

Botany: DOUGLAS HOUGHTON CAMPBELL. (468.)

Chemistry: JOHN MAXSON STILLMAN. (44c.)

Civil Engineering: CHARLES DAVID MARX. (271.)

Economics: MURRAY SHIPLEY WILDMAN. (223.)

Education: ELLWOOD PATTERSON CUBBERLEY. (51.) (First semester.)
LEWIS MADISON TERMAN. (51.) (Second semester.)

Electrical Engineering: HARRIS JOSEPH RYAN. (505.)

English: WILLIAM HERBERT CARRUTH. (209.)

Entomology and Bionomics: VERNON LYMAN KELLOGG. (431.)

Geology and Mining: BAILEY WILLIS. (340.)

Germanic Languages: GEORGE HEMPL. (32.)

Greek: AUGUSTUS TABER MURRAY. (25.)

History: EPHRAIM DOUGLASS ADAMS. (237.)

†Until January 1, 1916.
‡Beginning January 1, 1916.

Latin: Henry Rushton Fairclough. (22.)
Law: Frederic Campbell Woodward. (3.)
Mathematics: Robert Edgar Allardice. (70.)
Mechanical Engineering: William Frederick Durand. (260.)
Medicine: Ray Lyman Wilbur. (First semester.)
William Ophüls. (Second semester)
Anatomy: Arthur William Meyer. (7m.)
Bacteriology and Immunity: Wilfred Hamilton Manwaring. (15m.)
Chemistry: John Maxson Stillman. (44c.)
Hygiene and Public Health: William Freeman Snow. (New York, N. Y.)
Medicine: Ray Lyman Wilbur.
Obstetrics and Gynecology: Alfred Baker Spalding. (San Francisco.)
Pathology: William Ophüls. (San Francisco.)
Pharmacology: Albert Cornelius Crawford. (San Francisco.)
Physiology and Histology: Oliver Peebles Jenkins. (482.)
Surgery: Stanley Stillman. (San Francisco.)
Philosophy: Henry Waldgrave Stuart. (40.)
Physics: Fernando Sanford. (390.)
Physiology and Histology: Oliver Peebles Jenkins. (482.)
Psychology: Frank Angell. (399.) (First semester.)
Lillien Jane Martin, (401.) (Second semester.)
Romanic Languages: Oliver Martin Johnston. (242.)
Zoology: Charles Henry Gilbert. (443.)

STANDING COMMITTEES OF THE ACADEMIC COUNCIL

[The first named member in each Committee is Chairman.]

ADVISORY BOARD

Hoskins, Durand, Fairclough, Gilbert, Green, Kellogg, C. D. Marx, Sanford (Secretary), Woodward.

ADMINISTRATIVE COMMITTEES

1. Student Affairs: Folsom, Huston, Lesley, Miller, Moreno, Mrs. Allan.
2. Athletics: Murray, Folsom, J. P. Smith, Stolz, Wing.
3. Public Exercises: Peirce, H. C. Brown, Mitchell, Seward, Treat.
4. Literary Contests: Bassett, Alden, Cathcart, Foster, P. A. Martin.
5. Public Health: Mitchell, Meyer, Mosher, Stoltenberg, Stolz.
6. Scholarship: Gilbert, Elliott, Fish, Johnston, Whitaker, Woodward.
7. Public Entertainments: S. W. Young, Alden, C. D. Marx, Murray, Peirce.
8. Vocational Guidance.

ACADEMIC COMMITTEES

1. Executive Committee: Wilbur, Stillman, Alden, Cathcart, Elliott, Foster, Gilbert, Green, C. D. Marx, Meyer, Swain, Townley, Wildman.
2. Admission and Advanced Standing: Elliott, Bentley, Eckart, Show, Townley.
3. Registration: Elliott, Abrams, Davidson, Rendtorff, Stoltenberg.
4. Graduation: Wildman, Carruth, Elliott, Jenkins, Price.
5. Schedule and Examinations: Murray, Elliott, Elmore, McFarland, Ponzer.
6. Graduate Study: Franklin, Alden, Durand, Fairclough, Hoskins, Kellogg, Meyer, Peirce, Stillman, Stuart, Wildman.
7. Library: Stillman, Adams, Cooper, Durand, Gilbert.
8. University Publications: Kellogg, Adams, Briggs, G. T. Clark, Townley.
9. Recommendation of Teachers: Bentley, Cooper, Elliott, Seward, Show.

FACULTY AND OTHER OFFICERS

[Name; office; office hour; telephone; title; residence; post-office. Post-office in all cases *Stanford University* except where university residence is followed by initial letter of town ('p' indicates *Palo Alto* post-office; 'Mayfield-m,' *Mayfield* post-office; etc.). Street address *Palo Alto* or *Campus* unless otherwise named.

'Daily' does not include Saturday. Office hours are MTWThF unless otherwise noted. Brackets indicate 'absent on leave'; the dagger (†) marks the names of men who are married.

The superior number [1] indicates service for first semester only; [2] for second semester only.]

†ANDERSON, MELVILLE BEST,
Professor of English Literature, Emeritus, Florence, Italy

A. M., Butler University, 1877; LL. D., Aberdeen, 1906. Professor of Modern Languages, Butler University, 1877-80; Professor of English Literature, Knox College, 1881-86; Professor of Literature and History, Purdue University, 1886-87; Professor of the English Language and Literature, University of Iowa, 1887-91. At Stanford, since 1891, Emeritus since 1910.

†BARKAN, ADOLPH,
Professor of Structure and Diseases of Eye, Ear, and Larynx, Emeritus, SF, Fillmore 22
2209 Laguna, SF-sf

M. D., University of Vienna, 1866; LL. D., University of Glasgow, 1901; Professor of Ophthalmology and Otology, Medical Department, University of the Pacific, 1872-82, Cooper Medical College, 1882-1912; Eye and Ear Surgeon, Lane Hospital, 1895-1912. At Stanford, since 1909, Emeritus since 1911.

†BRANNER, JOHN CASPER, PA 1010
President, Emeritus, 13 Alvarado

B. S., Cornell, 1882; Ph. D., Indiana, 1885; LL. D., Arkansas, 1897, Maryville College, 1909. Assistant Geologist, Imperial Geological Survey of Brazil, 1875-78; Special Botanist in South America, 1880-81; Special Agent of the U. S. Department of Agriculture for Investigating Cotton and the Insects affecting it in Brazil, 1882-83; Topographical Geologist of the Geological Survey of Pennsylvania, Anthracite District, 1883-85; Professor of Geology, Indiana University, 1885-91; State Geologist of Arkansas, 1887-92; President Geological Society of America, 1904; Member California Earthquake Investigation Commission, 1906-07; Special Assistant, Geological Survey of Brazil, 1907-08; Professor of Geology, Leland Stanford Junior University, since 1891, Vice-President, 1898-1913, President, 1913-1915, Emeritus, since 1916. At Stanford, since 1891.

†HIRSCHFELDER, JOSEPH OAKLAND, SF, West 757
Clinical Professor of Medicine, Emeritus, 1392 Geary, SF-sf

M. D., University of Leipzig, 1876. Professor of Materia Medica, Medical College of the Pacific, 1877-81, Professor of Clinical Medicine, 1881-82; Professor of Clinical Medicine, Cooper Medical College, 1882-1912; Visiting Physician, City and County Hospital of San Francisco, 1878-1912; Visiting Physician, Lane Hospital, 1895-1912. At Stanford, since 1909, Emeritus since 1912.

†ABRAMS, LEROY, (465, MWF 9-12, 2-4) PA 1125
Associate Professor of Botany, 23 Salvatierra

A. B., Stanford, 1899, A. M., 1902; Ph. D., Columbia, 1910. Acting Professor of Botany, University of Idaho, 1899-1900; Assistant in Botany, Leland Stanford Junior University, 1900-02, Instructor, 1902-04; Fellow in Botany, Columbia University, 1904-05; Assistant Curator, Division of Plants, United States National Museum, 1905-06; Lecturer in Botany, University of California, first semester, 1915-16. At Stanford, 1900-04, and since 1906.

†ADAMS, EPHRAIM DOUGLASS, (237, TTh 11:15-11:45, T 2:30-3) PA 1038
Professor of History, 9 Alvarado

A. B., Michigan, 1887, Ph. D., 1890. Principal of High School, McGregor (Ia.), 1887; Principal of High School, Saginaw (Mich.), 1889; Special Agent in Charge of Street Railways, Eleventh Census, Washington (D. C.), 1890; Assistant Professor and afterward Professor of European History, University of Kansas, 1891-1902; Instructor in History, University of California, Summer Session, 1910. At Stanford, since 1902.

†ADDIS, THOMAS, Sausalito 194
Associate Professor of Medicine, 21 Miller av., Sausalito

M. B. Ch. B., Edinburgh, 1905, M. D. and M. R. C. P., 1908. Clinical Assistant, Medical Out-Patient Department, Royal Infirmary of Edinburgh, 1908, 1911; Medical Registrar, Leith Hospital, 1911; Carnegie Research Scholar and Fellow, 1908-11; Director of the Clinical Laboratory, Lane Hospital, since 1911. At Stanford, since 1911.

†ALDEN, RAYMOND MACDONALD, (209, MWF 10-10:15) PA 288
Professor of English, 427 Embarcadero road

A. B., Pennsylvania, 1894; A. M., Harvard, 1896; Ph. D., Pennsylvania, 1898. Instructor in English, Columbian University, 1894-95; Assistant in English, Harvard University, 1896-97; Senior Fellow in English, University of Pennsylvania, 1898-99, Instructor, 1899-1901; Assistant Professor of English Literature and Rhetoric, Leland Stanford Junior University, 1901-09, Associate Professor of English, 1909-11; Professor of English, University of Illinois, 1911-14; Acting Associate Professor, University of Chicago, Summer Quarter, 1910-11; Acting Professor, Harvard University, Summer Session, 1912. At Stanford, 1901-11 and since 1914.

†ALDERSON, HARRY EVERETT, SF, Park 461
Associate Clinical Professor of Medicine, 937 Ashbury, SF-sf

M. D., California, 1900; Assistant in Skin Diseases, Medical Department of University of California, 1906-12; Professor of Art Anatomy, California School of Design, 1906-12; Chief of Dermatological Clinic, San Francisco Fruit and Flower Mission. At Stanford, since 1912.

ALLAN, EVELYN WIGHT (Mrs.), (203, 10:15-12:15, Th res., 3-6) PA 1056
Dean of Women, 31 Salvatierra

B. S., St. Lawrence University, 1891; A. B., Stanford, 1896. Teacher in Montclair (N. J.), High School, 1892-95; Teacher of English, Jersey City High School, 1897-99; Graduate Student at Columbia University, 1907; Teacher of English, Manual Training High School, Brooklyn (N. Y.), 1899-1908. At Stanford, since 1908.

ALLARDICE, ROBERT EDGAR, (70, MWF 10:15-11:15) PA 1036
Professor of Mathematics, County Road

A. M., Edinburgh, 1882. Baxter Scholar in Mathematics, University of Edinburgh, 1882-83, Drummond Scholar in Mathematics, 1883-84; Assistant Professor of Mathematics, University of Edinburgh, 1883-92. At Stanford, since 1892.

†Allen, Clifford Gilmore, (245, MWF 11:15, TTh 1015) PA 1031X
Associate Professor of Romanic Languages, 25 Alvarado

A. B., Boston, 1900; A. M., Stanford, 1903; Docteur de l'Université de Paris, 1906. Student, University of Paris, 1903-04; Fellow of Boston University and Student at Universities of Paris and Madrid, 1904-05. At Stanford, since 1901.

[1†Angell, Frank, (399, TTh 2-3)
Professor of Psychology, In Europe]

B. S., Vermont, 1878; Ph. D., Leipzig, 1891; L. H. D., Vermont, 1892. Teacher in Washington (D. C.) High School, 1880-87; Assistant Professor of Psychology, Cornell University, 1891-92. At Stanford, since 1892.

†Bailey, Charles Hervey, SF, West 3807
Assistant Professor of Pathology, 2776 Jackson, SF-sf

A. B., Brown, 1903; M. D., Harvard, 1910. Resident Pathologist, St. Luke's Hospital, New York City, 1910-12, Associate Pathologist, 1912-14; Instructor in Clinical Pathology, Post-Graduate Medical School, New York City, 1913-14; Assistant in Cancer Research, Crocker Research Laboratory, New York City, 1914. At Stanford, since 1914.

Bailey, Margery, R 350Y
Acting Instructor in English, Redwood City

A. B., Stanford, 1914.

†Barkan, Hans, SF, Pacific 7057
Clinical Instructor in Surgery (Ophthalmology) 608 Lake, SF-sf

A. B., Stanford, 1905; M. D., Harvard Medical School, 1910. Assistant in Pathology, Harvard Medical School, 1910-11, Instructor, 1911-12; Pathologist to the Long Island Hospital and Boston City Almshouse, 1911-12. At Stanford, since 1914.

Barnett, George De Forest, SF West 8004
Instructor in Medicine, 2402 California, SF-sf

A. B., Stanford, 1906, A. M., 1909, M. D., 1913. Instructor in Chemistry, Leland Stanford Junior University, 1909-10; Student, Johns Hopkins Medical School, 1910-12; Senior House Officer, Lane Hospital, 1914-15.

†Bassett, Lee Emerson, (212, TTh 10:15, F 3:30) PA 1080
Associate Professor of English, 9 Cabrillo

A. B., Stanford, 1901. Graduate, Cumnock School of Oratory, Los Angeles, 1898; Instructor in Public Speaking, University of Southern California, 1898-99; Student, School of Expression, Boston, 1901; Student, Department of Literature, University of Chicago, summer, 1904; Student at Oxford, 1907-08. At Stanford, since 1901.

Beasley, Shadworth O., 240 Stockton, SF-sf
Clinical Instructor in Obstetrics and Gynecology,

M. D., Cooper Medical College, 1897. Acting Assistant Surgeon, U. S. A., 1898; 1st Lieutenant and Assistant Surgeon, U. S. Vol., 1898; Captain and Assistant Surgeon, U. S. Vol., 1900; Major and Surgeon, U. S. Vol., 1901-03; Assistant in Anatomy, Cooper Medical College, 1904-06, Assistant in Surgical Clinic, 1903-06, Assistant, Genito-Urinary Clinic, 1909-11. At Stanford, since 1913.

†Bentley, Rufus Clarence, (52, MWF 9:15) PA 1061X
Associate Professor of Education, 12 Alvarado

A. B., Nebraska, 1894, A. M., 1896. Assistant in Psychology, University of Nebraska, 1893-96; Principal of Schools, Shelton (Neb.), 1896-97; Principal of High School, Martinez (Cal.), 1897-98; Principal of High School and Supervising Principal of Schools, San Rafael (Cal.), 1898-1900; Fellow, Columbia University, 1900-01; Fellow, Clark University, 1901-03; Dean of Clark College, 1902-09, Professor of Latin, 1902-04, Professor of Pedagogy, 1904-09. At Stanford, since 1910.

Berger, Alice Ruth, (24c, 1:30-4:30)
Instructor in Chemistry, 73 No. 6th, SJ

A. B., Stanford, 1908, A. M., 1913. At Stanford, since 1911.

[2]Bevier, George, Jr.
Acting Instructor in Physiology, Encina

A. B., Stanford, 1912.

†Bingham, Joseph Walter, (4, MWF 11:15-12:15) PA 754K
Professor of Law, 1001 Cowper-p

A. B., Chicago, 1902, J. D., 1904. In practice of law, Chicago, 1904-05; Acting Assistant Professor of Law, Cornell University, 1905-07. At Stanford, since 1907.

†Blaisdell, Frank Ellsworth, SF, Pacific 3482
Assistant Professor of Surgery, 1520 Lake, SF-sf

M. D., Cooper Medical College, 1889. Demonstrator of Anatomy, Cooper Medical College, 1903, Instructor in Biology and Embryology, 1900-09, in Histology, 1907-09, Assistant Professor of Anatomy, 1904-05, Associate Professor, 1907-12. At Stanford, since 1910.

Blichfeldt, Hans Frederick, (74, TTh 11:15-12:15) PA 435
Professor of Mathematics, College Terrace

A. B., Stanford, 1896; Ph. D., Leipzig, 1898. At Stanford, since 1898.

Boardman, Walter Whitney, (Lane Hosp., 9-4) SF, Fillmore 2192
Assistant Professor of Medicine, 2186 California SF-sf

M. D., Cooper Medical College, 1909. Assistant in Phipps Dispensary, Johns Hopkins Hospital, 1910, Assistant in Actinography and Externe in Gynecology, 1911; Director of Actinography, Lane Hospital, 1912. At Stanford, since 1912.

†Boezinger, Bruno, (32, MWF 10:15) PA 196
Assistant Professor of German, 176 Bryant-p

A. B., Fort Worth University, 1894, A. M., 1895; Ph. D., Stanford, 1910. Instructor in German, North Texas Normal School, 1895-98; Principal, German Department, San Antonio (Texas) H. S., 1899-1906; Instructor in German, Summer School, University of Texas, 1896. At Stanford, since 1906.

†Bohart, George Shambaugh, (5c, MTThF 1:30-4:30) PA 717X
Instructor in Chemistry, 856 Middlefield-p

A. B., Stanford, 1911, A. M., 1912, Ph. D., 1914. At Stanford, since 1911.

†Briggs, William Dinsmore, (207½) PA 406K
Assistant Professor of English, 360 Kingsley-p

A. B., Stanford, 1896; A. M., Harvard, 1899, Ph. D., 1900. Student, Johns Hopkins University, 1896-97; Instructor in English and German, University of Vermont, 1900-01; Instructor in English, Western Reserve University, 1901-06. At Stanford, since 1906.

†Brodrick, Richard G., SF, Mission 827
Assistant Clinical Professor of Hygiene and Public Health, Potrero and 22d, SF-sf

M. D., Cooper Medical College, 1892. Assistant Surgeon, U. S. Navy, 1893, Naval Medical School, New York, 1893-94, Asiatic Station, 1894-98; Past Assistant Surgeon, U. S. Navy, 1896, retired from active duty, 1899; Student, Vienna, 1899-1902; Health Officer, San Francisco, 1908-10, 1912; Executive Secretary, San Francisco Association for the Study and Prevention of Tuberculosis, 1910-11. At Stanford, since 1912.

†Brown, Harold Chapman, (41, MWF 10:15-11:15, TTh 8:30-9:15)
Assistant Professor of Philosophy, PA 1006, 16 Salvatierra

A. B. Williams, 1901; A. M., Harvard, 1903, Ph. D., 1905; Student, University of Berlin, 1903-04; Assistant in Philosophy, Harvard University, 1904-06; Instructor in Philosophy, Columbia University, 1906-14. At Stanford, since 1914.

†Brown, Joseph Grant, (385) PA 559L
Assistant Professor of Physics, 1013 Ramona-p

A. B., Stanford, 1901, A. M., 1903. Graduate, Illinois State Normal University, 1894, Instructor in Physics and Chemistry, 1894-98. At Stanford, since 1900.

Buckingham, Elisabeth Lee, (211, 12:15, TTh 10:15) PA 1061K
Instructor in English, 19 Salvatierra

A. B., Stanford, 1910, A. M., 1914. Student, Columbia College of Expression, summer, 1913; Teacher of Public Speaking, State Normal School, San Jose, 1914. At Stanford, since 1911.

Burke, William Edmund, (45c, 1:30-4:30)
Acting Instructor in Chemistry, 603 Lytton-p

A. B., Stanford, 1907.

†Burlingame, Leonas Lancelot, (469, TTh 8:15-12:15) PA 1144
Assistant Professor of Botany, 24 Alvarado

Ph. B., Ohio Northern University, 1901; A. B., Chicago, 1906, Ph. D., 1908. Instructor in Biology, Ohio Northern University, 1901-04; Fellow in Botany, University of Chicago, 1906, Assistant, 1906-08. At Stanford, since 1908.

Burrell, Florence Cotton, PA 406X
Instructor in Roble Gymnasium, 364 Kingsley-p

A. B., Stanford, 1910. At Stanford, since 1913.

Campbell, Douglas Houghton, (468, 9-12, 2-4) PA 1036
Professor of Botany, County Road

Ph. M., Michigan, 1882, Ph. D., 1886. Teacher of Biology, Detroit High School, 1882-86; Student at Bonn, Tübingen, and Berlin, 1886-88; Professor of Botany, Indiana University, 1888-91. At Stanford, since 1891.

†Cannon, Henry Lewin, (237½, 9:15) PA 1046
Associate Professor of History, 301 Addison

A. B., Western Reserve, 1893; Ph. D., Pennsylvania, 1898. Student, Harvard University, 1893-94, Yale University, 1896-97; Fellow in European History, University of Pennsylvania, 1897-98; Instructor in History, University of Cincinnati, 1900-03. At Stanford, since 1903.

†CARRUTH, WILLIAM HERBERT, (209, MWF 9:15) PA 299
Professor of Comparative Literature, Mirada av.

A. B., Kansas, 1880, A. M., 1883; A. M., Harvard, 1889, Ph. D., 1893. Student, Universities of Berlin and Munich, 1885-86; Morgan Fellow at Harvard University, 1888-89; Instructor in English, University of Kansas, 1879-80, Assistant Professor of Modern Languages, 1880-82, Professor, 1882-89, Professor of German, 1889-1913, Vice-President, 1901-13; Professor of German Literature, University of Wisconsin, Summer Session, 1907; President, Central Division American Modern Language Association, 1894-97. At Stanford, since 1913.

†CATHCART, ARTHUR MARTIN, (1, TTh 10:15-11:15) PA 197
Professor of Law, 1001 Ramona-p

A. B., Stanford, 1896. Student, Harvard University, 1896-97; Registered Office Clerk with Attorneys of Colorado Supreme Court, 1900-02; Attorney at Law, Colorado Springs (Colo.), 1903-04; Lecturer in Law, University of California, Summer Session, 1908; Professor of Law, University of Chicago, Summer Quarter, 1911. At Stanford, since 1904.

†CHARLES, SAMUEL WATSON, PA 812L
Lecturer in Law, 251 Lincoln-p

A. B., Stanford, 1898.

†CHENEY, WILLIAM FITCH, SF, Pacific 2573
Clinical Professor of Medicine, 33 Spruce, SF-sf

B. L., California, 1885; M. D., Cooper Medical College, 1889. Professor of Principles and Practice of Medicine, Cooper Medical College, 1898-1912. At Stanford, since 1909.

[1]CHURCH, ELIZABETH,
Acting Assistant Professor of English, 1230 Emerson-p

A. B., Dalhousie, 1896; A. M., Radcliffe, 1903, Ph. D., 1913. Instructor in English, Medford (Mass.) High School, 1897-1905; W. E. A. Fellow at Radcliffe College, 1909-10; Acting Head of English Department, Rockford College, 1906-07; Instructor in English, Wellesley College, 1910-12; Assistant in English, Simmons College, 1912-13; Assistant Professor of English and Adviser of Women, University of Oklahoma, 1914-15.

†CLARK, ARTHUR BRIDGMAN, (95, 3-3:30) PA 1023
Associate Professor of Graphic Art, 4 Cabrillo

B. Ar., Syracuse, 1888, M. Ar., 1891. Director of Trade Schools and Instructor in Drawing, New York State Reformatory, Elmira (N. Y.), 1888-89; Instructor in Architecture, Syracuse University, 1889-92. At Stanford, since 1892.

†CLARK, GEORGE ARCHIBALD, (112, 9-12, 2:30-5) PA 1024
Academic Secretary, 7 Alvarado

B. L., Minnesota, 1891, A. M., 1911. Secretary, U. S. Fur Seal Commission, 1896-98; Special Investigator, Bureau of Fisheries, Fur Seal Investigation on the Pribilof Islands, 1909, 1912, 1913. At Stanford, since 1891.

†CLARK, GEORGE THOMAS, (Lib., 8:30-12:15, 1:30-4:30) PA 526K
Librarian, 14 Salvatierra

B. S., California, 1886. Assistant Librarian, University of California, 1886-87; Deputy State Librarian, California State Library, 1887-90, Classifier, 1890-94; Librarian, San Francisco Public Library, 1894-1907. At Stanford, since 1907.

†Clark, James Cameron, (507, 2:30-4:30)
Assistant Professor of Electrical Engineering, 151 Embarcadero-p

B. S., Iowa State College, 1907; M. E. E., Harvard, 1912; Engineering Apprentice Course, Westinghouse Electric & Manufacturing Company, 1907-09; Instructor in Electrical Engineering, Case School of Applied Science, 1909-11; Engineer on Electrolysis Surveys, U. S. Bureau of Standards, Washington (D. C.), summer, 1911. At Stanford, since 1912.

†Clark, William Redwood Price, SF, Franklin 3293
Clinical Instructor in Medicine, 1547 Jackson, SF-sf

M. D., Cooper Medical College, 1899. Assistant Visiting Physician, City and County Hospital, San Francisco, 1901-04; Instructor in Medicine, Cooper Medical College, 1905-11; Visiting Physician, Clinic of the San Francisco Association for the Study and Prevention of Tuberculosis, 1909-12; Visiting Physician, City and County Tuberculosis Hospital, San Francisco, 1911-12. At Stanford, since 1911.

†Clevenger, Galen Howell, (552, 2-4) PA 809
Associate Professor of Metallurgy, 381 Hawthorne-p

B. S., South Dakota School of Mines, 1901, E. M., 1908; A. M., Columbia, 1903; Engineer, Stanford, 1906. Superintendent Tailings Plant Operating Cyanide Process, Rapid City (S. D.), 1899-1901; Assayer and Chemist, Dakota Mining Co., Deadwood (S. D.), 1901-02; Research Metallurgist, National Smelting Co., Rapid City (S. D.), and Horseshoe Mining Co., Terry (S. D.), 1903-04; Special Assistant, U. S. Geological Survey, in charge of Electric Smelting Experiments at Portland (Or.), 1904-05; Consulting Metallurgical Engineer for companies operating in the United States, Mexico, and Central America; Special Study of Hydro-Metallurgical Methods in Mexico, 1906-09. At Stanford, 1904-06, and since 1909.

†Congdon, Edgar Davidson, (10m, 8-11) PA 396L
Assistant Professor of Anatomy, 330 Coleridge-p

A. B., Syracuse, 1901, A. M., 1902; Ph. D., Harvard, 1909. Austin Teaching Fellow in Zoology, Harvard University, 1906-09; Hooper Traveling Fellow in Zoology of Harvard University, at University of Zürich, 1909-10; Sheldon Traveling Fellow in Zoology of Harvard University, at Biologische Versuchs Anstalt and K. K. Institut für Radiumforschungen, Vienna, 1910-11; Instructor in Embryology, Cornell University Medical College, 1911-12. At Stanford, since 1912.

†Cooper, William Alpha, (35) PA 1031K
Associate Professor of German, 35 Salvatierra

A. B., Marietta, 1892, A. M., 1897. Student, Universities of Bonn, Leipzig, and Paris, 1892-94; Instructor in German and French, Marietta College, 1895-99, Professor, 1899-1901. At Stanford, since 1901.

†Coover, John Edgar, (416½, TTh 11:15) PA 933
Fellow in Psychic Research, and 11 Salvatierra
Assistant Professor of Psychology,

A. B., Stanford, 1904, A. M., 1905, Ph. D., 1912. At Stanford, since 1912.

Cowan, John Francis,
Instructor in Surgery, 2186 California, SF-sf

A. B., Stanford, 1902; M. D., Cornell University Medical College, 1910; Assistant and Acting Instructor in Physiology, Leland Stanford Junior University, 1903-06. At Stanford, since 1913.

†Crawford, Albert Cornelius, SF, Franklin 4615
Professor of Pharmacology, 920 Leavenworth, SF-sf

M. D., College of Physicians and Surgeons, Baltimore, 1893. Student at Johns Hopkins University, 1887-90, 1891-94, 1903. Assistant in Pharmacology, Johns Hopkins Medical School, 1894-1900; Pharmacologist, Bureau of Plant Industry, United States Department of Agriculture, 1904-08; Physiologist, Bureau of Animal Industry, United States Department of Agriculture, 1908-10. At Stanford, since 1910.

†Cross, Charles Norman, (504, TWThF 1:30-4:30) PA 1040K
Assistant Professor of Mechanical Engineering, 9 Salvatierra

M. E., Cornell, 1906. Assistant Engineer, Long Island State Hospital, Brooklyn (N. Y.), 1905; Dynamo and Switchboard Attendant with the New York Edison Co., New York City, 1905-06; Electrician with the Lackawanna Steel Co., Buffalo (N. Y.), 1906. At Stanford, since 1906.

[†Cubberley, Ellwood Patterson,
Professor of Education, New York, N. Y.]

A. B., Indiana, 1891; A. M., Columbia, 1902, Ph. D., 1905. Instructor in Science, Ridgeville College (Ind.), 1891; Professor of Physical Science, Vincennes University (Ind.), 1891-93, President, 1893-96; Superintendent of City Schools, San Diego (Cal.), 1896-98; Honorary Fellow, Columbia University, 1901-02, 1904-05; Professor of Education, University of California, Summer Sessions, 1901, 1906, University of Chicago, Summer Quarter, 1910, Harvard University, second half-year, 1910-11; Visiting Professor, Columbia University, Summer Sessions, 1907, 1914, 1916, second half-year, 1915-16. At Stanford, since 1898.

†Cutter, Lawrence Edminster, (274, MT 2-4, TTh 9-12) PA 459Y
Assistant Professor of Mechanical Engineering, 627 Webster-p

A. B., Stanford, 1906. Machinist Apprentice and Journeyman, Union Iron Works, San Francisco, 1895-99, 1899-1902, 1903, 1904, Draftsman, 1905, 1906. At Stanford, since 1906.

†Davidson, Percy Erwin, (53, MTW 11:15) PA 1442R1
Associate Professor of Education, Menlo Heights

A. B., Stanford, 1898; A. M., Harvard, 1905; Ph. D., Columbia, 1914. Teacher, Grammar and High Schools, San Diego (Cal.), 1898-1900; Supervisor of History and English Teaching, San Francisco State Normal School, 1900-03; Assistant in Education, San Diego State Normal, 1903-04; Graduate Student, Teachers' College, Columbia University, 1905-07; Instructor in Logic and History of Education, New York Training School for Teachers, 1906-07. At Stanford, since 1907.

[De Camp, Joseph Edgar,
Instructor in Psychology, Berkeley, Cal.]

A. B., Arkansas College; A. M., University of Michigan, Ph. D., 1914. Assistant in Psychology, University of Michigan, Summer Session, 1914; Instructor in Psychology, University of California, 1915-16. At Stanford, beginning August 1, 1916.

†Dickson, Ernest Charles, SF, Fillmore 1271
Assistant Professor of Medicine, 2294 Broderick, SF-sf

A. B., Toronto, 1904, M. B., 1906. Assistant Demonstrator in Physiology, University of Toronto, 1904-05, George Brown Research Scholar, 1906-07; Assistant Resident Physician, Johns Hopkins Hospital, 1907-08; Instructor in Pathology and Bacteriology, Cooper Medical College, 1908-10. At Stanford, since 1910.

†Doane, Rennie Wilbur, (430½, 1:30-4:30) PA 792L
Assistant Professor of Entomology, 527 Homer-p

A. B., Stanford, 1896. Assistant in Zoology and Botany, Washington State College, 1896-99; Assistant Professor of Zoology and Entomology, 1899-1901; Superintendent Fisheries Experiment Station, Keyport, (Wn.), 1901-03. At Stanford, since 1905.

[1]Draper, Roscal Leroy, PA 1159
Acting Instructor in Physiology, Encina

A. B., Stanford, 1913.

†Drew, Elmer Reginald, (384, MW 11:15-11:30) PA 362
Assistant Professor of Physics, 1321 Waverley-p

B. S., California, 1888; Ph. D., Cornell, 1903. Student, University of Chicago, 1897-98, University of Berlin, 1903-05; Assistant in Physics, University of California, 1889-92, Instructor, 1892-1902. At Stanford, since 1905.

†Durand, William Frederick, (260, MTWTh 11:15-12:15) PA 1076
Professor of Mechanical Engineering, 2 San Juan

Graduate U. S. Naval Academy, 1880; Ph. D., Lafayette, 1888. Engineer Corps, U. S. Navy, 1880-87; Special Duty as Assistant Professor of Mechanical Engineering, Lafayette College, 1883-85, Worcester Polytechnic Institute, 1887; Professor of Mechanics and Superintendent of Mechanical Department, Michigan State Agricultural and Mechanical College, 1887-91; Professor of Marine Engineering and Principal Graduate School of Naval Architecture and Marine Engineering, Cornell University, 1891-1904. At Stanford, since 1904.

†Eaton, Louis H., (84, MTh 3:30-4) PA 857
Organist, 431 University av.

†Eaves, James, SF, Fillmore 3446
Clinical Instructor in Surgery, 2511 Octavia, SF-sf

M. B. Ch. B., Edinburgh, 1909. Assistant, Guy's Hospital, London, 1910-11. At Stanford, since 1911.

†Eckart, William Rankine, (503, 1:30-4:30) PA 227
Professor of Mechanical Engineering, 1445 Bryant-p

M. E., Cornell, 1895. Mechanical Engineer, Siemens Halske Electric Co., Chicago, 1895-96; Construction Engineer, Allison Ranch Mine, Grass Valley (Cal.), 1896-98; Testing Work for Fraser & Chalmers, in Hawaii and Mexico, 1898-99; with W. R. Eckart, Consulting Engineer, Hydraulic Power Plants and Mining Work, 1899-1903, summers of 1904-08; Consulting Engineer, Geary St. P. & O. R. R., San Francisco, 1902-06. At Stanford, since 1903.

Eldred, Wilfred, (219, TTh 10:15-11:15) PA 1021
Instructor in Economics, 20 Lasuen

A. B. and A. M., Washington and Lee, 1909; A. M., Harvard, 1911. Thayer Scholar, Harvard University, 1910-11, Harris Fellow, 1911-12, Instructor in Economics, 1912-14; Instructor in History and Economics, San Diego High School and Junior College, 1914-15. At Stanford, since 1915.

†Elliott, Orrin Leslie, (117, 8:15-12:15, 1:30-4:30, S 9-12) PA 1045
Registrar, 5 Cabrillo

Ph. B., Cornell, 1885, Ph. D., 1890. Fellow in History and Political Science, Cornell University, 1885-86, Instructor in English, 1886-91,

Assistant Registrar and President's Secretary, 1890-91. At Stanford, since 1891.

†ELMORE, JEFFERSON, (22, MF 9:15-10) PA 1114X
Associate Professor of Latin, 1134 Emerson-p

A. B., Stanford, 1895, A. M., 1895, Ph. D., 1901. Principal of Merced County High School, 1895-97; Student, Universities of Bonn and Berlin, 1901-02. At Stanford, since 1898.

[ELOESSER, LEO, SF, Sutter 326
Assistant Professor of Surgery, 135 Stockton, SF-sf]

B. S., University of California, 1900; M. D., Heidelberg, 1907. Volunteer Assistant, Surgical Clinic, Heidelberg, 1906; Assistant, Cancer Institute, Heidelberg, 1906-07; Volunteer Assistant, Royal Surgical Clinic, Kiel, 1908-09; Volunteer Assistant, August Hospital, Berlin, 1909; Assistant in Surgery, University of California, 1910-12. At Stanford, since 1913.

†ELY, LEONARD W., (Lane Hospital, 12-1) PA 864
Associate Professor of Surgery (Orthopedics), 657 Cowper-p

A. B., Columbia, 1889; M. D., College of Physicians and Surgeons, Columbia University, 1895. At Stanford, since 1913.

†ESPINOSA, AURELIO MACEDONIO, (245, TTh 10:15) PA 998
Assistant Professor of Romanic Languages, 543 Middlefield

A. B., Colorado, 1902, A. M., 1904; Ph. D., Chicago, 1909. Assistant in Romance Languages, University of Colorado, 1901-02, Instructor in Spanish, Summer Term, 1904, 1905; Professor of Romance Languages, University of New Mexico, 1902-10; Fellow in Romance Languages and Instructor in Spanish, University of Chicago, 1908-09; Membre fondateur et callabrateur special de la Société International de Dialectologie Romane, 1909; Membro correspondiente de la Sociedad de Folklore chileno, 1910. At Stanford, since 1910.

FABER, HAROLD KNIEST, SF Fillmore 4177
Assistant Professor of Medicine (Pediatrics), 2051 Scott, SF-sf

A. B., Harvard, 1906; M. D., Michigan, 1911. Medical Interne, New York Hospital, 1911-13; Resident Pathologist, Babies' Hospital, New York, 1913-14; Fellow, Rockefeller Institute, New York, 1914-15.

†FAIRCLOUGH, HENRY RUSHTON, (22, WF 11:15-11:30) PA 1028K
Professor of Latin, 22 Alvarado

A. B., Toronto, 1883, A. M., 1886; Ph. D., Johns Hopkins, 1896. Fellow in Classics, University College, Toronto, 1883-84; Classical and English Master, Brockville High School, 1884-86; Graduate Scholar, Johns Hopkins University, 1886-87, Fellow, 1887; Lecturer in Greek and Ancient History, University College, Toronto, 1887-93; Professor of Latin, University of Wisconsin, Summer Session, 1906, Columbia University, Summer Session, 1908, University of Chicago, Summer Quarter, 1910; Professor of Latin, American School of Classical Studies, Rome, 1910-11. At Stanford, since 1893.

†FISH, JOHN CHARLES LOUNSBURY, (269, MW 1:30-4:30, TTh 9:15-12)
Professor of Railroad Engineering, PA 308, 1101 Emerson

C. E., Cornell, 1892. Instructor in Civil Engineering, Cornell University, 1892-93; Division Engineer, Lake Shore and Michigan Southern Railway, 1906-08. At Stanford, since 1893.

FISHER, WALTER KENRICK, (441, 8:15-12:15)
Assistant Professor of Zoology, 1525 Waverley-p

A. B., Stanford, 1901, A. M., 1903, Ph. D., 1906. Assistant, U. S. Biological Survey, 1897-1901, 1903; Assistant, U. S. Fish Commission, 1902. At Stanford, since 1902.

†FOLSOM, DAVID MORRILL, (556, 9:15-10:15, 2-4) PA 429
Associate Professor of Mining, 320 Embarcadero-p

A. B., Stanford, 1902, Engineer, 1904. Student Columbia School of Mines, 1902-03; Engineer with Boston and Montana Consolidated Copper and Silver Mining Co., 1904-09. At Stanford, since 1910.

†FOSS, JOHN HARRISON, (269, MTThF 1:30) PA 540L
Assistant Professor of Civil Engineering, 640 Waverley-p

A. B., Stanford, 1903. Assistant Engineer, Hamakua Ditch, Huelo, Maui (Hawaiian Islands), 1903-04, Engineer, 1904-05; Engineer, Maui Agricultural Co., Paia, Maui, 1905-07. At Stanford, since 1907.

†FOSTER, BENJAMIN OLIVER, (22, T 9:15-10:15) PA 767K
Associate Professor of Latin, 1445 Tasso-p

A. B., Stanford, 1895; A. M., Harvard, 1897, Ph. D., 1899. Parker Fellow of Harvard University, studying in the American School of Classical Studies in Rome, 1899-1900; Acting Professor of Latin and Greek, State Normal College of Michigan, 1900-01; Instructor, University of California, Summer Session, 1908. At Stanford, since 1901.

†FRANKLIN, EDWARD CURTIS, (35c) PA 216
Professor of Chemistry, 1057 Ramona-p

B. S., Kansas, 1888, M. S., 1890; Ph. D., Johns Hopkins, 1894. Chemist to the Palo Alto Plantation and Sugar Factory, Donaldsonville (La.), 1888; Chemist to the Bella Vista Mining and Milling Co., Los Quemados, Costa Rica, 1897; Instructor in Chemistry, University of Kansas, 1888-90; Student, University of Berlin, 1890-91; Assistant in Chemistry, University of Kansas, 1891-93, Associate Professor, 1894-99, Professor of Physical Chemistry, 1899-1903; Member of the U. S. Assay Commission, 1907; Chief of the Division of Chemistry, U. S. Public Health and Hospital Service, Washington, D. C., 1911-13. At Stanford, since 1903.

†GARDNER, DAVID CHARLES, (Vestry, TWThFS 9-12) PA 1068
Chaplain, 1a Alvarado

Graduate, Church Divinity School of the Pacific, San Mateo, 1897. Curate, St. James Mission, San Francisco, 1898; Rector of All Saints Church, Palo Alto, 1898-1902. At Stanford, since 1902.

†GARFIAS, VALENTINE RICHARD, (555, 10:15-12:15) PA 539K
Instructor in Geology and Mining, 515 University

A. B., Stanford, 1907, A. M., 1912. Petroleum Engineer, U. S. Bureau of Mines, 1913-14; Consulting Petroleum Engineer, U. S. Bureau of Mines, since 1915.

GARVER, FREDERIC BENJAMIN, (221, 9:15-10:15) PA 1031X
Assistant Professor of Economics, 25 Alvarado

A. B., Nebraska, 1909. Graduate Student, University of Wisconsin, 1909-10; Special Agent, Wisconsin Tax Commission, 1910; Fellow in Political Economy, University of Chicago, 1910-11, Assistant, 1911-12; Graduate Student, Harvard University, 1912-13; Instructor in Political Economy, University of Chicago, 1912-14. At Stanford, since 1914.

†GIBBONS, HENRY WALTER, SF, Fillmore 3740
Clinical Instructor in Obstetrics and Gynecology, 3491 Pacific, SF-sf

B. S., University of California, 1899; M. D., Cooper Medical College, 1902. Instructor in Pathology, Cooper Medical College, 1905-07; Instructor in Gynecology, 1907-11. At Stanford, since 1912.

†GIBBONS, MORTON RAYMOND, SF, Pacific 1658
Clinical Instructor in Medicine (Pediatrics), 3979 Wash., SF-sf

A. B., University of California, 1891; M. D., Cooper Medical College, 1894. Instructor in Clinical Medicine, Cooper Medical College, 1904-09. At Stanford, since 1912.

†GILBERT, CHARLES HENRY, (443, 9:30-10:30) PA 258
Professor of Zoology, 433 Melville

B. S., Butler University, 1879; M. S., Indiana, 1882; Ph. D., 1883. Assistant in Natural Sciences and Modern Languages, Indiana University, 1880-84; Professor of Natural History, University of Cincinnati, 1884-89; Professor of Zoology, Indiana University, 1889-91; Assistant to the U. S. Bureau of Fisheries, since 1880; Assistant, in charge of scientific exploration of the U. S. S. "Albatross," 1889, 1890, 1902, 1904, 1906. At Stanford, since 1891.

GIRARD, FRANK ROBERT, SF, Sutter 7200
Clinical Instructor in Obstetrics and Gynecology, Hotel Plaza, SF-sf

M. D., California, 1903. Volunteer Assistant Koenigliches Krankenhaus, Berlin, Germany, 1905-06; House Pathologist and House Surgeon, St. Luke's Hospital, New York, 1906-08; Assistant Resident Physician, Sloane Maternity Hospital, New York, 1908-09. At Stanford, since 1914.

GRAHAM, HARRINGTON BIDWELL, SF, Sutter 1535
Assistant Clinical Professor of Surgery, 209 Post, SF-sf

B. S., California, 1896, M. D., 1899. Superintendent of Waldeck Sanitarium, 1899; Assistant in Surgery, San Francisco Polyclinic, 1904; Assistant, Ear, Nose, and Throat Clinic, Cooper Medical College, 1910-11. At Stanford, since 1912.

†GRASS, DONALD FREDERICK, (221, MWF 10:15-11:15) PA 518X
Assistant Professor of Economics, 170 Waverley-p

Ph. B., Grinnell, 1894; A. B., Harvard, 1898, A. M., 1899; Ph. D., Stanford, 1914. Instructor in History and Economics, Council Bluffs (Ia.), High School, 1894-97, 1906-08; Professor of History and Economics, Tabor College, 1908-10. At Stanford, since 1910.

†GRAY, HAROLD F., PA 478Y
Acting Instructor in Bacteriology, 1327 Byron-p

2†GRAY, HENRY DAVID, (209, MWF 11:15) PA 298K
Assistant Professor of English, 915 Channing-p

Ph. B., Colgate, 1897; A. M., Columbia, 1898, Ph. D., 1904. Assistant in German and French, Colgate Academy, 1896-97: University Scholar, Columbia University, 1898-1900; Instructor in Dramatic Literature, American Academy of Dramatic Arts, 1900-02; Instructor in English, University of Texas, 1902-05; Lecturer in English, Columbia University, Summer Session, 1905. At Stanford, since 1905.

†Green, Rufus Lot, (71, TTh 10:15-11:15) PA 1127X
Professor of Mathematics, 13 Salvatierra

B. S., Indiana, 1885, A. M., 1889. Instructor in Mathematics, Indiana University, 1885-86, Assistant Professor, 1886-88, Associate Professor, 1889-91, Professor of Pure Mathematics, 1891-93; Student, Johns Hopkins University, 1886-87. At Stanford, since 1893.

†Griffin, James Owen, (35, TTh 9:15-10) PA 1054
Professor of German, 14 Alvarado

Graduate of the Pennsylvania State Normal School, 1873. Teacher in Pennsylvania State Normal School, 1873-74; Principal, Unadilla (N. Y.) Academy, 1874-79; Student, University of Göttingen, 1879-80; Principal of Delaware Academy (Delhi, N. Y.), 1880-85; Instructor in German, Cornell University, 1885-91, Registrar, 1890-91. At Stanford, since 1891.

†Grojean, Gabriel Henry, (245, MWF 10:15)
Instructor in French, 1212 Byron

B. A. and B. S., University of Lille (France), 1892-93; J. D., University of Toulouse, 1898, Licencié-ès-lettres, 1900. Lecturer in Germany, Student at University of Königsberg and in Italy, Teacher of Modern Languages in French high schools, 1911; Instructor in Romanic Languages, University of Pennsylvania, 1913. At Stanford, since 1914.

†Hall, Howard Judson, (206, TTh 10:15) PA 517K
Assistant Professor of English, 1015 Forest Court-p

B. S., Michigan State Agricultural College, 1890; A. B., Stanford, 1896; A. M., Harvard, 1900. Professor of English and Librarian, University of Arizona, 1891-1904. At Stanford, since 1904.

Ham, William Thomas, (208, TTh 11:15-12:15)
Acting Instructor in English, 660 Waverley-p

A. B., College of the Pacific, 1913. Instructor in English, College of the Pacific, 1913-15.

†Harcourt, Robert Henry, (541, 8:15-12:15, 1:30-4:30) PA 753X
Instructor in Forge Practice, 559 Everett-p

Blacksmith with Risdon Iron Works, San Francisco, 1898-1901, 1903-04; with Hammond Car and Elevator Company, San Francisco, 1901-02, 1904-05; with National Iron Works, San Francisco, 1902-03; with Abner Doble Steel Company, San Francisco, 1905-06, Foreman of Forge Shop, 1906-07. At Stanford, since 1907.

[†Heath, Harold, (436, MTThF 1:30-4) PA 557L
Professor of Zoology, 1147 Ramona-p

A. B., Ohio Wesleyan, 1893; Ph. D., Pennsylvania, 1898. Assistant in Biology, Ohio Wesleyan University, 1891-93; Professor of Biology, University of the Pacific, 1893-94; Harrison Fellow in Zoology, University of Pennsylvania, 1896-98. At Stanford, since 1894.

†Hempl, George, (32, 2:30) PA 617
Professor of Germanic Philology, 609 Kingsley-p

A. B., Michigan, 1879; Ph. D., Jena, 1889; LL. D., Wisconsin, 1904. Principal, Saginaw (Mich.) H. S., 1879-82, La Porte (Ind.) H. S., 1882-

84; Instructor in German, Johns Hopkins University, 1884-86; Student, Universities of Göttingen, Tübingen, Strassburg, Jena, and Berlin, 1886-89; Assistant Professor of English, University of Michigan, 1889-93, Junior Professor, 1893-97, Professor of English Philology and General Linguistics, 1897-1906; Professor of English, University of Chicago, Summer Quarter, 1897; President of the American Dialect Society, 1900-05; President of the Modern Language Association, 1902-03; President of the American Philological Association, 1903-04. At Stanford, since 1906.

[HEWLETT, ALBION WALTER,
Professor of Medicine, Ann Arbor, Mich.]

B. S., University of California, 1895; M. D., Johns Hopkins, 1900. Assistant Professor of Theory and Practice of Medicine, Cooper Medical College, 1906-08; Professor of Internal Medicine, University of Michigan, 1908-16. At Stanford, beginning August 1, 1916.

†HILL, FRANK ERNEST, (206, MW 1:30, T 9:15) PA 417Y
Instructor in English, 203 Addison-p

A. B., Stanford, 1911, A. M., 1914. Assistant in English, University of Illinois, 1912-13. At Stanford, since 1913.

HILL, HAROLD PHILLIPS, SF, West 967
Associate Clinical Professor of Medicine, 2336 Steiner, SF-sf

A. B., Stanford, 1898; M. D., University of California, 1901. Assistant in Physiology, Department of Medicine, University of California, 1899-1901, Instructor, 1901-03; Assistant Visiting Physician, St. Luke's Hospital, 1903-06, Visiting Physician, since 1906. At Stanford, since 1912.

†HOISHOLT, ANDREW WILLIAM,
Clinical Professor of Psychiatry, State Hospital, Napa-n

M. D., Cooper Medical College, 1882; M. D., University of Heidelberg, 1884. Adjunct to chair of Physiology, Cooper Medical College, 1891-95; Assistant Physician, State Hospital, Stockton, 1889-1913; Superintendent Napa State Hospital, since 1913. At Stanford, since 1912.

HOLSCLAW, FLORENCE MABEL, SF, Prospect 3700
Clinical Instructor in Medicine (Pediatrics), 1373 Clay, SF-sf

A. B., Stanford, 1894; M. D., Cooper Medical College, 1897. Assistant in Pediatrics, Cooper Medical College, 1900-11. At Stanford, since 1912.

†HOSKINS, LEANDER MILLER, (275, 11:30-12) PA 75
Professor of Applied Mathematics, 365 Lincoln-p

B. C. E. and B. S., Wisconsin, 1883, M. S., 1885, C. E., 1887. Instructor in Engineering, University of Wisconsin, 1885-89, Assistant Professor of Mechanics, 1889-91, Professor of Theoretical and Applied Mechanics, 1891-92. At Stanford, since 1892.

†HOTCHKISS, WILLARD E., (223, MTWTh 10:15-11) PA 1129
Acting Professor of Political Science, 29 Salvatierra

Ph. B., Cornell, 1897, A. M., 1903, Ph. D. 1905. Instructor in Political Science, University of Pennsylvania, 1904-05; Assistant Professor of Political Science, Northwestern University, 1905-07, Associate Professor, 1907-09, Professor, since 1909, Dean of School of Commerce, since 1908.

†Huston, Charles Andrews, (7, TWTh 2:30-3) PA 782Y
Professor of Law, 1040 Ramona-p

A. B., Chicago, 1902, J. D., 1907; S. J. D., Harvard, 1913. Fellow in Political Economy, University of Chicago, 1902-03; Assistant in Rhetoric, 1903-04; Associate in Rhetoric, 1904-06; Professor of Law, University of Chicago, Summer Quarter, 1914. At Stanford, since 1906.

Ichihashi, Yamato, (233, MWF 11:15-12) PA 932
Instructor in Japanese History and Government, 1010 Emerson

A. B., Stanford, 1907, A. M., 1908; Ph. D., Harvard, 1914. Assistant in Economics, Leland Stanford Junior University, 1908-10; Special Agent for U. S. Immigration Commission, 1908-10; Graduate Student, Harvard University, 1910-12, Henry Bromfield Roger Memorial Fellow in Sociology, 1911-12. At Stanford, since 1913.

†Jenkins, Oliver Peebles, (482) PA 1040X
Professor of Physiology and Histology, 3 Lasuen

A. B., Moore's Hill College, 1869, A. M., 1872; M. S., Indiana, 1886, Ph. D., 1889. Professor of Natural Science, Moore's Hill College, 1876-82; Professor of Natural Science, Indiana State Normal School, 1883-86; Professor of Biology, De Pauw University, 1886-91. At Stanford, since 1891.

†Johnston, Oliver Martin, (242, TTh 9:15; MWTh 3:30)
Professor of Romanic Languages, PA 1040L, 4 Alvarado

A. B., Mississippi College, 1890, A. M., 1892; Ph. D., Johns Hopkins, 1896. Principal, Preparatory Department, Mississippi College, 1890-91, Professor of English, 1891-93; Fellow in Johns Hopkins University, 1895-96; Lecturer in French Philology, Bryn Mawr College, 1896-97. At Stanford, since 1897.

†Jordan, David Starr, (425, 11:15-12:15, 2:30-3:30) PA 1001
Chancellor, Xazmin House

M. S., Cornell, 1872; M. D., Indiana Medical College, 1875; Ph. D., Butler College, 1878; LL. D., Cornell, 1886, Johns Hopkins, 1902, Illinois College, 1903. Instructor in Botany, Cornell, 1871-72; Professor of Natural History, Lombard University, 1872-73; Principal of Appleton (Wis.) Collegiate Institute, 1873-74; Lecturer in Marine Botany at Penikese, 1873-74; Teacher of Natural History, Indianapolis H. S., 1874-75; Professor of Biology, Butler College, 1875-79; Instructor in Botany, Harvard Summer School, Cumberland Gap, 1875-76; Assistant to U. S. Fish Commission, 1877-91; Professor of Zoology, Indiana University, 1879-85; President of Indiana University, 1885-91; President of the California Academy of Sciences, 1896-98, 1901-03, 1908, 1911; U. S. Commissioner in charge of Fur Seal Investigations, 1896-98, of Salmon Investigations, 1904; International Commissioner of Fisheries, 1908-10; President of the American Association for the Advancement of Science, 1909-10; Member of International Commission of Zoological nomenclature, from 1904; Chief Director, World Peace Foundation, since 1910. President of Leland Stanford Junior University, 1891-1913, Chancellor since 1913.

*†Kellogg, Vernon Lyman, (431, 11-12) PA 1141
Professor of Entomology, 14 Cabrillo

B. S., Kansas, 1889, M. S., 1892. Student, Cornell University, 1891, University of Leipzig, 1893; Assistant Professor of Entomology, University of Kansas, 1890-93, Associate Professor, 1893-94. At Stanford, since 1894.

†KELLOGG, WILFRED HARVEY, SF, Fillmore 1751
Clinical Instructor in Hygiene, 2820 Vallejo, SF-sf

Ph. G., California, 1892, M. D., 1896. Bacteriologist, San Francisco Health Department, 1900-03; State Bacteriologist, California, 1908; Acting Assistant Surgeon, U. S. Public Health Service detailed for plague investigations in Venezuela, 1909-11; Director of Laboratories, Department of Public Health, San Francisco, since 1912. At Stanford, since 1914.

†KENNEDY, ARTHUR GARFIELD, (212, TF 1:20) PA 729K
Instructor in English Philology, 1130 Bryant-p

A. B., Doane College, 1902; A. M., Nebraska, 1905; Ph. D., Stanford, 1914.

†KIRKWOOD, MARION RICE, (6, MTWTh 2-2:30) PA 436Y
Assistant Professor of Law, 1325 Bryant-p

A. B., Stanford, 1909, J. D., 1911. Student, Harvard Law School, 1909-10; Assistant Professor of Law, University of Oklahoma, 1911-12. At Stanford, since 1912.

KNOCH, CHARLOTTE A., (35, TTh 11:15) PA 1106
Instructor in German, 2 Lasuen

A. B., Stanford, 1897. Student, University of Göttingen, 1894, University of Berlin, 1913-14; Teacher in Los Angeles Schools, 1890-93; in charge of Modern Languages, Pasadena High School, 1898-1902, Vice-Principal and Head of Modern Languages, 1902-11, of Modern and Ancient Languages, 1911-13. At Stanford, since 1914.

[†KREHBIEL, EDWARD BENJAMIN,
Professor of History, Washington, D. C.]

A. B., Kansas, 1902; Ph. D., Chicago, 1906. Graduate Student, University of Chicago, 1902-06, Fellow, 1903-05, Assistant, 1904-06; Graduate Student, Harvard University, 1904; Student, Ecole de Chartes, Paris. 1905; Instructor, University of Chicago High School, 1905-06; Assistant in History, University of Chicago, 1906-07, Instructor, 1907-09. At Stanford, since 1909.

†LENOX, LIONEL REMOND, (40c, 2-4) Mt. View 47
Professor of Analytical Chemistry, Mountain View

Ph. B., Columbia, 1888. Assistant Chemist, Bethlehem Iron Co., 1887; Instructor in Chemistry, Lehigh University, 1888-91; Chemist, Ordnance Department, U. S. N., Washington (D. C.), 1891-92. At Stanford, since 1892.

†LESLEY, EVERETT PARKER, (266, MWF 8:15) PA 253
Associate Professor of Mechanical Engineering, 807 Waverley-p

A. B., Stanford, 1897; M. M. E., Cornell, 1905. Apprentice and Foreman in Union Iron Works, San Francisco, 1897-1903. Assistant Inspector to Naval Constructor, 1903-04; Draftsman at U. S. Experimental Model Basin, Washington (D. C.), 1905-07. At Stanford, since 1907.

†LIGGETT, JAMES BENNETT, (540, 8:15-12:15, 1:30-4:30) PA 533L
Instructor in Foundry Practice, 445 Forest-p

Apprentice and Foundry Moulder, Falls Rivet and Machine Co., Cuyahoga Falls (Ohio), 1883-88, Webster, Camp & Lane, Akron (Ohio), 1888-93, Bowler & Co., Cleveland (Ohio), 1893-98, Cleveland Steel Casting Co., 1898-99; Foreman, Born Steel Range Co., Cleveland (Ohio), 1899-1902, Westinghouse Electric Co., Cleveland (Ohio), 1902. At Stanford, since 1902.

LUTZ, RALPH HASWELL, (236, MTWTh 10:15-10:35) PA 970
Lecturer in European History, Stanford Union

A. B., Stanford, 1906; LL.B., Washington, 1907; A. M., Ph. D., Heidelberg, 1910. Student, University of California, Summer, 1906, Universities of Bonn and Heidelberg, 1907-10, University of Berlin, Summer, 1913. Instructor in History, University of Washington, since 1911.

†LYMAN, GEORGE DUNLAP, SF, Fillmore 3456
Clinical Instructor in Medicine (Pediatrics), 3647 Wash., SF-sf

A. B., Stanford, 1905; M. D., Columbia, 1909. House Physician, Bellevue Hospital, New York, 1909-11. At Stanford, since 1912.

MCCRACKEN, MARY ISABEL, (433, 8:30-12:30)
Assistant Professor of Entomology, 5 Salvatierra

A. B., Stanford, 1904, A. M., 1905, Ph. D., 1908. At Stanford, since 1904.

†MCDOWELL, JOHN EZRA, (120, 8:15-12:15, 1:30-4:30) PA 1044
Assistant Registrar, 10 Cabrillo

A. B., Stanford, 1900. At Stanford, since 1900.

†MCFARLAND, FRANK MACE, (480, MTW 1:30-4:30) PA 480
Professor of Histology, 2 Cabrillo

Ph. B., De Pauw, 1889, A. M., Stanford, 1893; Ph. D., Würzburg, 1896. Professor of Biology and Geology, Olivet College, 1889-92; Student Würzburg, Zürich, and Naples, 1894-96. At Stanford, since 1892.

†MCKEE, ALBERT BROWN, SF, Garfield 371
Clinical Professor of Surgery 1258 Flood Building, SF-sf
(Ophthalmology),

Ph. B., University of the Pacific, 1883, Ph. M., 1886; M. D., Cooper Medical College, 1886. Instructor and Acting Head of the Eye, Ear, Nose, and Throat Division, University of California Medical Department, 1902-08; Associate Professor of Ophthalmology, Cooper Medical College, 1908-12. At Stanford, since 1912.

†MCMURPHY, JAMES IRA WILSON, (429, TTh 8:15-11:15)
Instructor in Botany, College Terrace

A. B., Stanford, 1908, A. M., 1909. At Stanford, since 1908.

MCNAUGHT, HARVARD YOUNG, SF, West 3057
Clinical Instructor in Surgery, 2211 California, SF-sf

M. D. C. M., Trinity University, 1897. Fellow by Examination, Trinity Medical College, 1897: Assistant, Ear, Nose, and Throat Clinic, Cooper Medical College, 1911-12. At Stanford, since 1913.

†MALONEY, HENRY WILFRED, (Encina Gym., 2:30-4:30) PA 696
Instructor in Physical Training, 176 Waverley-p

†MANNING, WILLIAM ALBERT, (62, 9:15-10:15) PA 689L
Associate Professor of Applied Mathematics, 604 Tennyson-p

A. B., Willamette University, 1900; A. M., Stanford, 1902, Ph. D., 1904. Acting Assistant Professor of Mathematics, University of Illinois, 1909-10. At Stanford, since 1900.

MANWARING, WILFRED HAMILTON, (15m, TTh 9-11) PA 1054
Professor of Bacteriology and Immunity, 14 Alvarado

B. S., Michigan, 1895; M. D., Johns Hopkins, 1904. Instructor in Physiology, State Normal School, Winona, Minn., 1898-1901; Fellow and Assistant in Pathology, University of Chicago, 1904-05; Associate Professor of Pathology, Indiana University, 1905-07; Traveling Fellow, Rockefeller Institute, 1907-08, Assistant in Pathology and Bacteriology, 1910-13; Research worker, Emil Fischer's Laboratory and v. Wassermann's Laboratory, Berlin, 1907-08, Pathological Institute, Leipzig, and Ehrlich's Laboratory, Frankfort-on-Main, 1908-09, Physiological Institute, London, and Lister Institute of Preventive Medicine, London, 1909-10. At Stanford, since 1913.

†MARSHALL, THOMAS MAITLAND, (235, MW 11:15-12) PA 845
Acting Assistant Professor of History, 7 Salvatierra

B. L., Michigan, 1900; M. L., California, 1910, Ph. D., 1914. Studying at Leland Stanford Junior University, 1910-11; Instructor in History, Alameda High School, 1908-15; Honorary Fellow, Texas State Historical Association, 1915.

†MARTIN, ERNEST WHITNEY, (25, TTh 10:15) PA 132
Associate Professor of Greek, 525 Lincoln-p

A. B., Chicago, 1900; A. M., Stanford, 1902, Ph. D., 1910. Instructor in Latin and Greek, Private School, Clarinda (Ia.), 1895-96, Principal of High School, 1896-98; Student, University of Berlin, and American School of Classical Studies, Rome, 1900-01; Acting Professor of Latin and Greek, University of Nevada, 1908-09, Professor of Greek, 1909-10. At Stanford, since 1901.

MARTIN, LILLIEN JANE, (401, TTh 4:30) PA 909
Professor of Psychology, 15 Salvatierra

A. B., Vassar, 1880; M. L. A. and Ph. D., Bonn, 1913. Teacher of Science, Indianapolis High School, 1880-89: Vice-Principal and Head of Department of Science, Girls High School, San Francisco, 1889-94; Student, University of Göttingen, 1894-98. At Stanford, since 1899.

[2]†MARTIN, PERCY ALVIN, PA 455Y
Assistant Professor of European History, 380 Kingsley

A. B., Stanford, 1902, A. M., 1903; A. M., Harvard, 1907, Ph. D., 1912. Student, University of Paris, 1903-04, Universities of Berlin and Leipzig, 1907-08; Fellow. Harvard University, 1908; Professor of History and French, Whittier College, 1904-05. At Stanford, since 1908.

†MARX, CHARLES DAVID, (271, 8:15-9:15) PA 255
Professor of Civil Engineering, 357 Kingsley

B. C. E., Cornell, 1878; C. E., Karlsruhe Polytechnicum, 1881. Instructor in Civil Engineering, Karlsruhe Polytechnicum, 1880-81; U. S. Assistant Engineer, Missouri River Improvement, 1882-84; Assistant Professor of Civil Engineering, Cornell University, 1884-90; Professor of Civil Engineering, University of Wisconsin, 1890-91. At Stanford, since 1891.

†MARX, GUIDO HUGO, (274, 9:15) PA 715
Professor of Mechanical Engineering, 356 Lincoln

M. E., Cornell, 1893. With Gleason Tool Co., Rochester (N. Y.), 1893-94; with Bement, Miles & Co., Philadelphia, 1894-95. At Stanford, since 1895.

†Meyer, Arthur William, (7m, MWF 11-12) PA 335K
Professor of Anatomy, 121 Waverley-p

B. S., Wisconsin, 1898; M. D., Johns Hopkins, 1905; Assistant and Instructor in Anatomy, Johns Hopkins University, 1905-07; Assistant Professor of Anatomy, University of Minnesota, 1907-08; Professor of Anatomy, Northwestern University, 1908-09. At Stanford, since 1909.

†Miller, Stephen Ivan, Jr., (219, 2-3) PA 813
Assistant Professor of Economics, 374 Kingsley

LL. B., University of Michigan, 1896; A. B., Stanford, 1898. Student at Heidelberg, 1900-02, University of Michigan, 1902-03; Quiz-Master, University of Michigan, 1903-04; Instructor in Economics and History, Pasadena High School, 1905-07; in United States Forest Service, 1908-10; Instructor in Economics, Los Angeles Polytechnic High School, 1910-12. At Stanford, since 1912.

Mirrielees, Edith Ronald, (207A, MTh 9:15, T 3:30) PA 723K
Instructor in English, 1027 Emerson

A. B., Stanford, 1907. At Stanford, since 1909.

†Mitchell, John Pearce, (10c, 2-4) PA 722
Assistant Professor of Chemistry, 235 Embarcadero

A. B., Stanford, 1903, A. M., 1904, Ph. D., 1909. Student, University of Leipzig, 1904-05. At Stanford, 1903-04, and since 1905.

Moore, Chester Biven, SF, Fillmore 2192
Clinical Instructor in Obstetrics and Gynecology, 2186 California, SF-sf

B. S., California, 1906, M. D., 1910. Interne, University of California Hospital, 1909-11; House Officer, Children's Hospital, Boston, 1911-12. At Stanford, since 1913.

†Moreno, Halcott Cadwalader, (63) PA 1028X
Associate Professor of Applied Mathematics, 28 Alvarado

A. B., University of Georgia, 1893, A. M., 1894, B. L., 1896; Ph. D., Clark, 1900. Tutor in Mathematics, University of Georgia, 1893-97; Scholar and Fellow in Mathematics, Clark University, 1897-1900, Assistant in Mathematics, Clark University, 1900-01. At Stanford, since 1901.

†Moser, Charles, (523, MWF 10:15) PA 592X
Instructor in Civil Engineering, 651 Homer-p

C. E., Ohio Northern University, 1902; A. B., Stanford, 1908. At Stanford, since 1908.

Mosher, Clelia Duel, (94, MWThF 1-2, T 1-1:30) PA 23
Director of Roble Gymnasium and Medical Adviser to Women, 1094 Emerson

A. B., Stanford, 1893, A. M., 1894; M. D., Johns Hopkins, 1900. Assistant in Hygiene and Physical Training, Leland Stanford Junior University, 1893-94, Instructor, 1894-96; Externe in the Johns Hopkins Hospital Dispensary, and Gynecological Assistant in Dr. Kelly's Sanatorium, Baltimore (Md.), 1900-01; Physician, Palo Alto, 1901-10. At Stanford, 1893-96, and since 1910.

†Mulock, Fred S., (506, 1:30-4:30) PA 22
Instructor in Electrical Engineering, 540 University-p

A. B., Stanford, 1915.

†MURRAY, AUGUSTUS TABER, (25, TTh 11:15-12:15) PA 481Y
Professor of Greek, 1019 Bryant

A. B., Haverford, 1885; Ph. D., Johns Hopkins, 1890. Fellow in Johns Hopkins University, 1887-88; Professor of Greek, Earlham College, 1888-90; Student, Universities of Leipzig and Berlin, 1890-91; Professor of Greek, Colorado College, 1891-92. At Stanford, since 1892.

OLIVER, JEAN REDMAN, SF, West 6193
Instructor in Pathology, 1926 Octavia, SF-sf

A. B., Stanford, 1911, M. D., 1914. Assistant in Pathology, Stanford Medical School, 1914-15.

†O'NEILL, ARTHUR ALOYSIUS, SF, Mission 238
Clinical Instructor in Medicine, Army and De Haro, SF-sf

M. D., Cooper Medical College, 1891. Assistant Surgeon, Cooper Medical College Clinic, 1893; Assistant in Diseases of the Skin, San Francisco Polyclinic, since 1902; in charge of Isolation and Plague Hospital, 1907-10, of Isolation Hospital, 1912. At Stanford, since 1913.

†OPHÜLS, WILLIAM, SF, Fillmore 1680
Acting Dean of the Medical School, and 114 Walnut, SF-sf
Professor of Pathology,

M. D., University of Göttingen, 1895. Assistant at the Pathologic Institute at Göttingen, 1896-97; Professor of Pathology and Bacteriology, University of Missouri, 1897-98; Professor of Pathology and Bacteriology, Cooper Medical College, 1898-1912; Pathologist, Lane Hospital, since 1898. At Stanford, since 1909.

†ORDAHL, GEORGE,
Buckel Fellow in Education, 754 Bryant-p

A. B., Oregon, 1905, A. M., 1906; Ph. D., Clark, 1908.

†OWENS, WILLIAM BROWNLEE, (5, MWF 3:30-4:30) PA 944K
Instructor in Law, 905 Scott-p

LL. B., Stanford, 1915.

†PALMATEER, THERON J., (530, 8:15-12:15, 1:30-4:30)
Instructor in Machine Shop Practice, 171 E.Oxford,Mayfield-m

Apprentice with Sibley & Ware, South Bend (Ind.); Journeyman Machinist, 1896-1905, with R. Hoe & Co., New York, Columbus Machine Works, Columbus, O., Elems Engineering Works, Chicago, Western Gas Engine Works, Mishawaka, Ind., Webster Iron Works, Bakersfield, Cal., R. S. Hunkins, San Jose, Cal. At Stanford, since 1904.

PARIS, ETTA LOUISE, PA 1005
Instructor in Roble Gymnasium, 60 Roble Hall

Graduate, Sargent's School for Physical Education, 1908; Student of Mme. Zeniné, and of Gilbert School of Dancing, Boston; Teacher of Physical Training, Y. W. C. A., Indianapolis (Ind.), 1908-10, Columbia College of Expression, 1910-11, Durant Gymnasium, 1911-12. At Stanford, since 1913.

†PEIRCE, GEORGE JAMES, (466, W 3:30) PA 436X
Professor of Botany and Plant Physiology. 281 Embarcadero

S. B., Harvard, 1890; A. M. and Ph. D., Leipzig, 1894. Assistant in Botany, Harvard University and Radcliffe College, 1890-92; Parker Fellow in Harvard University, studying in Bonn, Leipzig, and Munich, 1892-94; Assistant Professor of Botany, Indiana University, 1895-97; Acting Professor of Botany, University of Wisconsin, second semester, 1910-11. At Stanford, since 1897.

[PELLISSIER, ROBERT EDOUARD,
Assistant Professor of French, In Europe]

B. S., Harvard, 1904, A. M., 1909, Ph. D., 1913. Shattuck Scholar in Romance Languages, Harvard University, 1910-11. At Stanford, 1909-10, and since 1911.

†PONZER, ERNEST WILLIAM, (64, 11:15-12)
Assistant Professor of Applied Mathematics, 939 Cowper-p

B. S., Illinois, 1900, M. S., 1903. Instructor in Mathematics, University of Illinois, 1900-09. At Stanford, since 1909.

†POOR, HENRY VARNUM, (314, 1:30-4:30) PA 600K
Assistant Professor of Graphic Art, 1236 Cowper-p

A. B., Stanford, 1910. Student, Slade School, University College, London, 1910, Julien's Academy, Paris, 1911; Instructor, Leland Stanford Junior University, 1911-12, Art Institute, Kansas City, Mo., 1913. At Stanford, 1911-12 and since 1913.

†PORTER, LANGLEY, SF, Pacific 1674
Clinical Professor of Medicine 44 Commonwealth, SF-sf
(Pediatrics),

B. S., Pennsylvania Military College, 1890; M. D., Cooper Medical College, 1896; L. R. C. P., M. R. C. S., England, 1900. Senior Dresser, London Hospital, 1900; Resident Physician, St. Mark's Hospital, London, 1901-02; City Physician, in charge of Contagious Diseases, San Francisco, 1903-08; Assistant Professor of Pediatrics, Cooper Medical College, 1908, Associate Professor, 1909-12. At Stanford, since 1912.

†PRICE, GEORGE CLINTON, (446) PA 1053
Professor of Zoology, 5 Alvarado

B. S., De Pauw, 1890; Ph. D., Stanford, 1897. Student in Biology, Johns Hopkins University, 1890-92; University of Munich, 1895-96. At Stanford, since 1892.

†REINING, CHARLES, (TTh 10:15) PA 455L
Instructor in German, 340 Embarcadero-p

A. B., Stanford, 1908; A. M., Harvard, 1911; Ph. D., Stanford, 1915.

†RENDTORFF, KARL GUSTAV, (32, TTh 9:15) PA 449Y
Associate Professor of German, 318 Lincoln-p

A. M., Stanford, 1894, Ph. D., 1896. Student, University of Giessen, 1884-85, University of Kiel, 1885-91. At Stanford, since 1894.

†RIGDON, RUFUS LEE, SF, Fillmore 2285
Clinical Professor of Surgery 1617 Broderick, SF-sf
(Genito-Urinary),

M. D., Cooper Medical College, 1887. Assistant and Instructor in Genito-Urinary Clinic, Cooper Medical College, 1888-98, Associate Professor of Genito-Urinary Surgery and Chief of Genito-Urinary Clinic, 1898-1908, Professor of Genito-Urinary Surgery, 1908-12. At Stanford, since 1912.

†RIXFORD, EMMET, SF, Franklin 5100
Professor of Surgery, 1795 California, SF-sf

B. S., California, 1887; M. D., Cooper Medical College, 1891. Adjunct Professor of Surgery, Cooper Medical College, 1893-98; Professor 1898-1912; Visiting Surgeon, Lane Hospital, 1895, City and County Hospital, San Francisco, since 1899. At Stanford, since 1909.

[†Robinson, Edgar Eugene,
Assistant Professor of American History, Minneapolis, Minn.]

A. B., Wisconsin, 1908, A. M., 1910. Assistant in History, University of Wisconsin, 1908-09, Fellow in American History, 1909-10; Assistant Professor of History, Carleton College, 1910-11. At Stanford, since 1911.

†Rogers, Austin Flint, (362, MTThF 10:15) PA 812X
Associate Professor of Mineralogy, 1047 Ramona-p

A. B., Kansas, 1899, A. M., 1900; Ph. D., Columbia, 1902. Assistant in Mineralogy, University of Kansas, 1898-1900; Assistant Geologist, University Geological Survey of Kansas, 1898-1900, 1903; Fellow in Mineralogy, Columbia University, 1900-02, Tutor in Mineralogy, 1902-05. At Stanford, since 1905.

†Rogers, Frederick John, (381)
Associate Professor of Physics, 550 S. 6th, San Jose

M. S., Cornell, 1891. Instructor in Physics, Cornell University, 1892-1900. At Stanford, since 1900.

†Ross, Perley Ason, (386, 1:30-4:30)
Instructor in Physics, 209 Hanover, College Terrace

A. B., Stanford, 1908, A. M., 1910, Ph. D., 1911. At Stanford, since 1908.

†Rothganger, George, SF, Kearny 2206
Clinical Instructor in Surgery, 126 Stockton, SF-sf

A. B., California, 1885; M. D., Cooper Medical College, 1888. Assistant Medical Officer U. S. N., 1889-1908. At Stanford, since 1913.

Russell, Theresa Peet (Mrs.), (209½, 11:15) PA 1061K
Instructor in English, 19 Salvatierra

Ph. B., Iowa, 1895. Teacher in Denison Normal School, 1895-96; Principal, Vilisca High School, 1896-98; Graduate Student at Radcliffe College, 1898-99; Teacher in Anamosa High School, 1899-1900. At Stanford, since 1905.

†Ryan, Harris Joseph, (505, 11:15-12:15) PA 1075
Professor of Electrical Engineering, 5 Santa Ynez

M. E., Cornell, 1887. With Western Engineering Co., Lincoln, Neb., 1887-88; Instructor in Physics, Cornell University, 1888-89, Assistant Professor of Electrical Engineering, 1889-92, Associate Professor, 1892-95, Professor, 1895-1905; Judge, Board of Awards, World's Fair, Chicago, 1893; U. S. Government Delegate, International Electrical Congress, St. Louis Exposition, 1904. At Stanford, since 1905.

†Sanford, Fernando, (390) PA 646
Professor of Physics, 450 Kingsley

B. S., Carthage College, 1879, M. S., 1882. Student, University of Berlin, 1886-88; Professor of Physical Science, Mt. Morris College, 1879-82; Superintendent of Schools, Ogle County, Ill., 1882-86; Instructor in Physics and Chemistry, Englewood (Ill.), High School, 1888-90; Professor of Physical Science, Lake Forest University, 1890-91. At Stanford, since 1891.

†Schaller, Walter Frank, SF, Pacific 4495
Assistant Clinical Professor of Medicine, 140 24th ave., SF-sf

M. D., Cooper Medical College, 1902. Assistant in Pathology, Cooper

Medical College, 1905-06; Assistant Surgeon, U. S. N., 1906-08. At Stanford, since 1911.

SEARS, HARRY JOHNSON, (6m) PA 393K
Instructor in Bacteriology, 707 Bryant-p

A. B., Stanford, 1911, A. M., 1912, Ph. D., 1916. At Stanford, since 1911.

†SEARS, JESSE BRUNDAGE, (52, 10:15) PA 689Y
Assistant Professor of Education, 1545 Waverley-p

A. B., Stanford, 1909. Instructor in Education, University of Wisconsin, 1909-10; Student, Teachers' College, Columbia University, 1910-11. At Stanford, since 1911.

†SEWALL, EDWARD CECIL, SF, Pacific 5257
Clinical Professor of Surgery, 166 Arguello blvd., SF-sf

A. B., Stanford, 1898; M. D., Cooper Medical College, 1902. Assistant and Instructor in Ophthalmology, Cooper Medical College, 1901-07, Assistant Professor, 1907-09; Student in Freiburg, 1909-10; Associate Professor of Diseases of Eye, Ear, Nose, and Throat, Cooper Medical College, 1910-12. At Stanford, since 1912.

[2]SEWARD, SAMUEL SWAYZE, JR., (208, TTh 10:15, MW 12:15)
Assistant Professor of English, PA 728X, 262 Kingsley-p

A. B., Columbia, 1896, A. M., 1897. Scholar in Literature, Columbia University, 1896-97; Assistant in Literature, 1897-99; Student, Oxford University, 1899-1900; Acting Professor of English, University of Nevada, 1907; Assistant Professor of English, University of California, Summer Session, 1907, University of Oregon, Summer Session, 1908. At Stanford, since 1900.

SHOW, ARLEY BARTHLOW, (233, MWF 11:15-12) PA 865
Professor of European History, 127 Cowper

A. B., Doane College, 1882; Graduate, Andover Theological Seminary, 1885; A. M., Doane, 1892. Pastor Congregational Church, Waco, Neb., 1885-87; Professor of History and English Literature, Doane College, 1887-92; Student, University of Leipzig, 1900-01; Lecturer on History of the Early Church, Pacific Theological Seminary, Berkeley, 1905-07. At Stanford, since 1892.

†SLOAN, WILLIAM HENRY, (49c, 1:30-4:30) PA 1454R2
Assistant Professor of Chemistry, Alta Mesa, Box 105-p

A. B., Stanford, 1903, A. M., 1904. Student, University of Leipzig, 1904-05; Assistant Chemist, San Francisco Board of Health, 1905-06. At Stanford, 1903-04, and since 1906.

†SLONAKER, JAMES ROLLIN, (481, MTThF 10:30-11) PA 451
Assistant Professor of Physiology, 334 Kingsley-p

B. S., Wisconsin, 1893; Ph. D., Clark, 1896. Fellow in Biology, Clark University, 1893-96; with United States Fish Commission, Woods Holl (Mass.), summer, 1895; Instructor in Zoology, Indiana University, 1896-99, Indiana University Biological Station, 1896-1900; Assistant Professor of Zoology, Indiana University, 1899-1901; Research Assistant in Neurology, University of Chicago, 1901-02, Associate in Neurology, 1902-03. At Stanford, since 1903.

†SMITH, EVERETT WALLACE, (205, M 10:15, T 1:30) PA 1127K
Assistant Professor of English, 10 Alvarado

A. B., Stanford, 1899. At Stanford, since 1910.

†Smith, James Perrin, (329, 1:30-4:30) PA 600Y
Professor of Paleontology, 1335 Cowper-p

A. B., Wofford College, 1884; A. M., Vanderbilt, 1886; Ph. D., Göttingen, 1892. Assistant Geologist and Chemist, Arkansas Geological Survey, 1887-90; Assistant Geologist, U. S. Geological Survey, 1895-1906, Geologist since 1906. At Stanford, since 1892.

†Smith, Stanley Astredo, (245, MWF 12:15) PA 972K
Assistant Professor of French, 417 Channing

A. B., Stanford, 1903, A. M., 1905. Assistant in Romanic Languages, Leland Stanford Junior University, 1903-04, Instructor, 1904-07; Student, Universities of Paris and Madrid, 1906-07; Instructor in French and Italian, University of Washington, 1907-11; Student, Harvard University, 1911-13, Instructor in Romance Languages, 1912-1; Professor of Romance Languages; Reed College, 1913-14. At Stanford, 1903-07 and since 1914.

[†Snow, William Freeman,
Clinical Professor of Hygiene and Public Health, NewYork,N.Y.]

A. B., Stanford, 1896, A. M., 1897; M. D., Cooper Medical College, 1900. Student, Johns Hopkins Medical School, 1901-02; Secretary California State Board of Health, 1909-13. At Stanford, since 1901.

†Snyder, John Otterbein, (428, 2-5) PA 600L
Associate Professor of Zoology, 1345 Cowper

A. B., Stanford, 1897, A. M., 1899. Assistant U. S. Fish Commission, 1897, 1899, 1904; Naturalist on U. S. S. Albatross engaged in deep sea investigations, 1902, 1906. At Stanford, since 1897.

†Somers, George Burbank, SF, Fillmore 296
Clinical Professor of Gynecology, 2662 Vallejo, SF-sf

A. B., Harvard, 1886; M. D., Cooper Medical College, 1888. Chief Surgeon, San Francisco Emergency Hospital, 1891-95; Adjunct to Chair of Gynecology, Cooper Medical College, 1889; Professor of Gynecology, 1901; Gynecologist to Lane Hospital, 1900-12. At Stanford, since 1911.

†Spalding, Alfred Baker, (Lane Hospital) SF, Fillmore 826
Professor of Obstetrics and Gynecology, 2651 Green, SF-sf

A. B., Stanford, 1896; M. D., Columbia, 1900. House Surgeon, General Memorial Hospital, New York. 1900-01; Assistant Resident Physician, Sloane Maternity Hospital, New York, 1901-02; Instructor in Obstetrics, University of California. 1902-05, Assistant Professor, 1905-09, Professor, 1909-12. At Stanford, since 1912.

†Stanley, Edward John, (535, 8:15-12:15, 1:30-4:30) PA 544K
Instructor in Woodworking, 269 Hawthorne-p

Machinist with Pacific Iron Works, San Francisco, 1879, Blacksmith, 1880, Draughtsman, 1881, Pattern Maker, 1883-86; Third Assistant Engineer, Steamer Alabama, 1882; Foreman Pattern Maker, Union Iron Works, San Francisco, 1886-1901, 1906. At Stanford, since 1901.

Starks, Chloe Lesley (Mrs.), (Studio, 1:30-4:30) PA 812Y
Instructor in Graphic Art, 1115 Ramona-p

At Stanford, since 1899.

†Starks, Edwin Chapin, (423) PA 812Y
Assistant Professor of Zoology, 1115 Ramona-p

Assistant in United States Bureau of Biological Survey, 1897-99; Curator of the Museum and Assistant Professor of Zoology, University of Washington, 1899-1900. At Stanford, since 1900.

†Stebbins, Horatio Ward, (260, TTh 9:15-12:15, TWThF 1:30-4:30)
Instructor in Mechanical Engineering, PA 652Y, 281 Addison-p

A. B., California, 1899; B. S., Massachusetts Institute of Technology, 1902. Assistant to Engineer of Tests, Southern Pacific Railroad Company, 1902-05; Engineer and Estimator, San Francisco Bridge Company, 1905-13. At Stanford, since 1914.

Stephenson, Henry Augustus, (Lane Hospital) SF, Fillmore 4061
Assistant Professor of Obstetrics and Gynecology, 2051 Scott, SF-sf

A. B., Randolph-Macon College, 1906; M. D., Johns Hopkins Medical School, 1910. Assistant Resident Obstetrician, Johns Hopkins Hospital, 1911-12, Resident Obstetrician, 1912-14; Assistant in Obstetrics, Johns Hopkins Medical School, 1911-12, Instructor, 1912-14. At Stanford, since 1914.

†Stillman, John Maxson, (44c, 2-4) PA 1048
Vice-President, and Professor of Chemistry, 2 Alvarado

Ph. B., California, 1874, Ph. D., 1885. Assistant in Chemistry, University of California, 1873-75; Student in Chemistry, Strassburg and Würzburg, 1875-76; Instructor in Organic and General Chemistry, University of California, 1876-82; Chemist of the Boston Sugar Refining Company and Superintendent and Chemist of the American Sugar Refining Company, Boston, 1882-91. At Stanford, since 1891.

†Stillman, Stanley, SF, West 1034
Professor of Surgery, 2336 Broadway, SF-sf

M. D., Cooper Medical College, 1889. Adjunct Professor of Surgery, Cooper Medical College, 1895-98, Professor of Surgery, 1898-1912; Assistant Visiting Surgeon, City and County Hospital, San Francisco, 1891-99, Visiting Surgeon, 1899-1912; Visiting Surgeon, Lane Hospital, 1895-1912. At Stanford, since 1909.

Stoltenberg, Clara S., (485, MW 8:15-12:15, T 1:30-4:30) PA 1024
Associate Professor of Physiology, 7 Alvarado

A. B., Stanford, 1896, A. M., 1897. At Stanford, since 1896.

†Stolz, Herbert Rowell, (Gym., 9-12, 2-4) PA 601K
Director of the Men's Gymnasium and Medical Adviser of Men Students, 355 Kellogg

A. B., Stanford, 1911, M. D., 1914. Rhodes Scholar at Oxford, 1910-13. At Stanford, since 1914.

†Stuart, Henry Waldgrave, (40, 11:30-12) PA 1069
Professor of Philosophy, 8 Alvarado

Ph. B., California, 1893; Ph. D., Chicago, 1900. Teacher, Hollister (Cal.) H. S., 1893-94; Fellow in Political Economy, University of Chicago, 1894-96; Instructor (pro tem) in Economics and Psychology, Washington University, St. Louis, 1896-97; Teacher, Central School, Oakland (Cal.), 1897-98; Principal, Woodland (Cal.) H. S., 1898-99;

Fellow in Philosophy, University of Chicago, 1899-1900; Instructor in Economics and History, Ripon College, 1900-01; Instructor in Philosophy, State University of Iowa, 1901-04; Acting Professor of Philosophy, Lake Forest College, 1904-05, Assistant Professor, 1905-07. At Stanford, since 1907.

†SWAIN, ROBERT ECKLES, (33c, 2-4) PA 247
Professor of Chemistry, 638 Channing-p

A. B., Stanford, 1899; M. S., Yale, 1901, Ph. D., 1904. Student, Universities of Strassburg and Heidelberg, 1901-02, Yale University, 1909-10. At Stanford, since 1898.

†TATLOCK, JOHN S. P., (212, MWF 12:15) PA 1061Y
Professor of English Philology, 11 Alvarado

A. B., Harvard, 1896, A. M., 1897, Ph. D., 1903. Student, Universities of Michigan, 1899-1901, Freiburg in Breisgau, 1904; Instructor in English, University of Michigan, 1897-1901, 1903-05, Assistant Professor, 1905-07, Junior Professor, 1903-12, Professor, 1912-15; Professor of English, University of Chicago, Summer Quarter, 1909, Dartmouth College, Summer Session, 1914; Vice-President, Modern Language Association of America, 1914. At Stanford, since 1915.

†TERMAN, LEWIS MADISON, (45, 11-11:25) PA 1178
Associate Professor of Education, 9 Dolores

A. B., Indiana, 1902, A. M., 1903; Ph. D., Clark University, 1905. Fellow in Psychology and Education, Clark University, 1903-05; Principal of High School, San Bernardino (Cal.), 1905-06; Head of Department of Child Study and Pedagogy, Los Angeles State Normal School, 1906-10; Instructor in Education, Indiana University, Summer Session, 1909. At Stanford, since 1910.

†TERRY, MARCUS CLAUDE, PA 395Y
Acting Instructor in Bacteriology, 536 Middlefield-p

M. D., Rush Medical College, 1899. At Stanford, since 1913.

†TOLMAN, CYRUS FISHER, JR., (337, 11:15-12) PA 1052L
Associate Professor of Economic Geology, 6 Alvarado

B. S., Chicago, 1896. Fellow in Geology, University of Chicago, 1907-08; Consulting Economic Geologist, 1899-1913; Professor of Geology, University of Arizona, 1905-06, Professor of Geology and Mining, 1906-12; Territorial Geologist of Arizona, 1910-12. At Stanford, since 1912.

†TOWNLEY, SIDNEY DEAN, (66, TTh 11:15-12) PA 1016
Associate Professor of Applied Mathematics, 33 Salvatierra

B. S., Wisconsin, 1890, M. S., 1892; D. Sc., Michigan, 1897. Fellow in Astronomy, University of Wisconsin, 1890-91, Assistant in Astronomy and Mathematics, 1891-92; Hearst Fellow in Astronomy, University of California (Lick Observatory), 1892-93; Instructor in Astronomy, University of Michigan, 1893-95, 1896-98; Student, Universities of Berlin and Munich, 1895-96; Instructor in Practical Astronomy, University of California, 1898-1903, Lecturer in Astronomy, 1904-07; Astronomer in charge of International Latitude Observatory, 1903-07. At Stanford, since 1907.

[2]TRACE, GERTRUDE MAY,
Acting Instructor in Psychology, 730 Univ., San Jose-sj

A. B., Stanford, 1914.

†Treat, Payson Jackson, (236, MWF 11-11:15) PA 1128
Professor of History, 27 Salvatierra

A. B., Wesleyan, 1900; A. M., Columbia, 1903; Ph. D., Stanford, 1910. Instructor in History, Barnard School, New York City, 1900-03; Graduate Student, Leland Stanford Junior University, 1903-05; Research Student in Far East, 1906-07; Instructor in Government, Harvard University, 1908-09; Lecturer in Political Science, University of California, second semester, 1915-16. At Stanford, since 1905.

†Vann, Eugene Ellis, (235, TTh 10:15-10:45) PA 847X
Acting Instructor in History, 846 Bryant

A. B., Birmingham College, 1902; B. D., Vanderbilt, 1907; A. M., Columbia, 1915; Master's Diploma in Education, Teacher's College, Columbia, 1915. Instructor in Correspondence School, Vanderbilt University, 1905-07; Secretary and Educational Director, People's Institute, Rio de Janeiro, 1907-10; Professor of History and Greek, Granbery College, Brazil, 1910-14; Extension Instructor in Portuguese, Columbia University, 1915; Instructor in Portuguese, Columbia University, Summer Session, 1915.

deVries, Louis Peter, (245, M 11:15, T 9, TTh 10:15) PA 533X
Instructor in Romanic Languages, 603 Waverley

A. M., Wisconsin, 1911, Ph. D., 1913. Student, University of Leyden, 1909; Assistant and Teaching Fellow in Romance Languages, University of Wisconsin, 1910-12. At Stanford, since 1913.

†West, Victor J., (220, 9:15-10:15) PA 291X
Assistant Professor of Political Science, 376 Addison-p

Ph. B., Chicago, 1905. Instructor in English and Civics, Bradley Polytechnic Institute, 1905-06; Fellow in Political Science, University of Chicago, 1908-10, Assistant in Political Science, 1910; Instructor in Politics, Northwestern University, 1910-13; Assistant Chief of Service, Illinois Progressive Service Board, 1913. At Stanford, since 1913.

†Weymouth, Frank Walter, (484) PA 1040Y
Assistant Professor of Physiology, 3 Salvatierra

A. B., Stanford, 1909, A. M., 1911. At Stanford, since 1910.

†Whitaker, Albert Conser, (220, MTWTh 10-10:20) PA 1042X
Professor of Economics, 26 Alvarado

A. B., Stanford, 1899; Ph. D., Columbia, 1904. Scholar in Economics, Columbia University, 1899-1900, Fellow, 1900-01; Student, University of Berlin, 1901-02; Lecturer in Economics and Social Science, Columbia University, 1906-07; Professor of Economics, University of California, Summer Session, 1906, 1911; Acting Professor of Economics, University of Chicago, second half of 1911-12 and 1912-13. At Stanford, since 1902.

†Whittier, Clarke Butler, (2, TTh 11:30-12) PA 1443, R1
Professor of Law, Menlo Heights

A. B., Stanford, 1893; LL.B., Harvard, 1896. Attorney at Law, Los Angeles, 1895-96; Student, Leland Stanford Junior University, 1896-97, Instructor in Law, 1897-99, Assistant Professor, 1899-1900, Associate Professor, 1900-02; Professor of Law, University of Chicago, 1902-14. At Stanford, 1897-1902, and since 1915.

†Wilbur, Ray Lyman, PA 46
President, Professor of Medicine, Dean of the Medical School (first semester), 1201 Bryant-p

A. B., Stanford, 1896, A. M., 1897; M. D., Cooper Medical College, 1899. Assistant in Physiology, Leland Stanford Junior University, 1894-96, Instructor, 1896-97, Assistant Professor, 1900-03; Lecturer and Demonstrator in Physiology, Cooper Medical College, 1899-1900. At Stanford, 1894-97, 1900-03, and since 1909.

†Wildman, Murray Shipley, (223, 2-4) PA 1179
Professsor of Economics, 37 Salvatierra

A. B., Earlham, 1893; Ph. D., Chicago, 1904. Professor of History and Economics, Central College (Mo.), 1904-05; Instructor in Economics, University of Missouri, 1905-06, Assistant Professor, 1906-08; Acting Assistant Professor, University of Chicago, Summer Quarter, 1909; Assistant Professor of Economics and Commerce, Northwestern University, 1909-11, Professor, 1911-12. At Stanford, since 1912.

Williams, Frank Thomas, SF, Fillmore 1400
Clinical Instructor in Surgery (Genito-Urinary), 2015 Buchanan, SF-sf

A. B., Johns Hopkins, 1908, M. D., 1912. House Officer, St. Agnes Hospital, Baltimore, 1912-13; Assistant, Genito-Urinary Clinic, Johns Hopkins Hospital, 1913-14; Special Worker, Hygiene Laboratory, United States Public Health Service, Washington, D. C., 1914; Assistant Resident Surgeon, James Buchanan Brady Urological Institute of the Johns Hopkins Hospital, 1914-15. At Stanford, since 1915.

[1]Williams, J. Harold, (43) PA 1109
Buckel Fellow in Education. 11 Salvatierra

A. B., Stanford, 1913, A. M., 1914.

†Willis, Bailey, (340, 8:15-12, 1:15-5:15) PA 1118
Professor of Geology, 5 Lasuen

E. M., Columbia School of Mines, 1878, C. E., 1879; Hon. Ph. D., University of Berlin, 1910. Special Expert, Iron Ores, Tenth Census, 1879-81; Geologist, Northern Transcontinental Survey, exploration for Northern Pacific and Allied Companies, 1881-84; Geologist, United States Geological Survey, in charge Appalachian Division, New York to Alabama, Cascade Range and Puget Sound Division, Washington, and Editor Geologic Atlas of the United States, 1884-1915; Assistant to Director, United States Geological Survey, 1897-1902; Geologist in charge of Division of Areal and Stratigraphic Geology, 1900-06; Geologist engaged in Geological explorations in China under auspices of Carnegie Institution, 1903-04; Lecturer on Geology, Johns Hopkins University, 1895-1902, University of Chicago, 1909; Consulting Geologist to Minister of Public Works, Argentina, 1911-14. At Stanford, since 1915.

†Wing, Charles Benjamin, (278, 11:15-11:45) PA 947K
Professor of Structural Engineering, 345 Lincoln

C. E., Cornell, 1886. Fellow in Civil Engineering, Cornell University, 1886-87, Instructor, 1887-90, Assistant Professor, 1890-91; Engineer, Pompton (N. J.) Powder Co., 1887, Phoenix Powder Co., Farmingdale, N. Y., 1888; Assistant Engineer, Berlin (Conn.) Iron Bridge Co., 1889-90; Professor of Bridge and Hydraulic Engineering, University of Wisconsin, 1891-92. At Stanford, since 1892.

†WINTERMUTE, GEORGE PRESTON, Berkeley 5933
Clinical Instructor in Surgery, 227 Tunnel road, Berkeley-b

M. D., Jefferson Medical College, 1893. At Stanford, since 1912.

WOLFSOHN, JULIAN MAST, SF, Fillmore 1526
Clinical Instructor in Medicine (Neurology), 2502 Fillmore, SF-sf

A. B., University of California, 1905, M. S., 1907; M. D., Johns Hopkins University Medical School, 1911. Research Assistant, Herzstein Laboratory, University of California, 1906-07; Medical House Officer, Johns Hopkins Hospital, 1911-12. At Stanford, since 1913.

†WOODWARD, FREDERIC CAMPBELL, (3, 2:30-3) PA 1062
Professor of Law, 21 Salvatierra

LL. B., Cornell, 1894, LL. M., 1895; A. M., Dickinson College, 1902. Attorney at Law, practicing in New York City, 1895-98; Professor of Law, Dickinson College, 1898-1902; Professor of Law, Northwestern University, 1902-07; Professor of Law, University of Chicago, Summer Quarter, 1908, 1914, University of Michigan, Summer Session, 1915. At Stanford, since 1907.

†YERINGTON, HENRY HERBERT, SF, Pacific 5464
Assistant Clinical Professor of Medicine, 78-25th ave., SF-sf

M. D., College of Physicians and Surgeons, New York, 1908. Student, Stanford University, 1900-04. Instructor in Pediatrics, Cooper Medical College, 1910-11. At Stanford, since 1913.

YOUNG, HAYES WILSON, (553, 1:30-4:30) PA 1013
Instructor in Metallurgy, 109 Encina

A. B., Stanford, 1911, Engineer, 1912. At Stanford, since 1911.

†YOUNG, STEWART WOODFORD, (46c, 9:30-12, 2-5) PA 390L
Professor of Physical Chemistry, Bryant and Tennyson-p

B. S., Cornell, 1890. Assistant in Chemistry, Cornell University, 1890-91; Instructor in Chemistry, Swarthmore College, 1891-93. At Stanford, since 1893.

ASSISTANTS

[2]Adams, William L., Pediatrics, 2101 Webster, SF-sf
M. D., Tulane Medical School, 1890.

Adler, Howard Felix, Surgery, 1590 Broadway, SF-sf
B. S., California, 1904; M. D., Harvard, 1908. German Hospital, New York City, 1908-11.

Behlow, William Wallace, Medicine, 233 Post, SF-sf
A. B., Stanford, 1907; M. D., Harvard, 1912. Graduate Student, University of California, 1907; Assistant Visiting Physician, San Francisco Hospital, since 1914.

Boezinger, Lydia Marie, Secretary to Dean of Medical School, 2504 Sacramento, SF-sf

Bol, Cornelis, Physics, College Terrace
B. S., Montana, 1914.

Brandsten, Ernest, Men's Gymnasium, 329 Hawthorne

†Brasch, Frederick E., Law Librarian, 911 Scott

Brier, Edward Blake, Civil Engineering, 245 Ramona-p
A. B., Occidental, 1913.

[2]Briggs, Revoe Carlisle, Civil Engineering, 520 Lytton-p
A. B., Stanford, 1913.

Bristol, Susan Brown, Appointment Secretary, 1155 Ramona
A. B., Stanford, 1897. At Stanford, since 1900.

Brooks, Lucia May, Chief of Serial Department, Lib., 1 Salvatierra
Cataloguer, University of Minnesota Library, 1905-09.

Brown, Joseph Richard, Obstetrics and Gynecology, 930 Pierce, SF-sf
A. B., Santa Clara, 1907; M. D., Georgetown University, 1911. Assistant Demonstrator in Anatomy, Georgetown University, 1911.

†Brown, Kearn Babcock, Entomology, 467 Melville-p
Ph. B., Alfred University, 1912.

†Burrows, John Robert, Surgery, 2007 Buchanan, SF-sf
M. D., Cooper Medical College, 1906. Assistant in Ophthalmology, Cooper Medical College, 1909.

†Butler, Edmund, Medicine, 798 Post, SF-sf
M. D., Cooper Medical College, 1911. Resident Surgeon and Senior Interne in Surgery, Lane Hospital, 1912-14; Surgeon Municipal Emergency Hospital, since 1914; Associate Member of Staff of St. Luke's Hospital, since 1914.

[2]Castle, Otis Henry, Student Adviser 26 Lasuen
A. B., Stanford, 1914.

Chislett, William, Jr., Latin, 20 Lasuen
A. B., Stanford, 1910, A. M., 1911.

Christal, Charles Henry, Medicine, 1271 Pine, SF-sf
L. R. C. P., L. R. C. S., L. M., Dublin, 1908. Resident Medical Officer, Hammersmith Infirmary, London, 1908-09; Resident Surgical Officer, The Hospital, Weston-super-Mare, England, 1909-10; Senior House Surgeon, Bolingbroke Hospital, London, 1911-12.

Clark, Laura Cornelia, Mathematics, 64 Roble

Cosgrave, Millicent Mary, Medicine, 2619 Octavia, SF-sf

M. D., Cooper Medical College, 1902. Assistant, Children's Clinic, Cooper Medical College, 1904-08; Assistant, Medical Clinic, San Francisco Polyclinic, 1904-13; Chief, Gynecological Clinic, San Francisco Fruit and Flower Mission, 1906-13.

Cox, Anna Shipley, Latin, 855 Chapman, San Jose-sj

A. B., Stanford, 1909, A. M., 1913.

†Dillon, James Root, Surgery, 2053 Sutter, SF-sf

A. B., Stanford, 1908; M. D., Cooper Medical College, 1912.

[1]Eldred, Fred Huestis, Chemistry, 178 Encina

B. S., Occidental, 1914; A. M., Stanford, 1916.

†Elsey, Howard McKee, Chemistry, 734 Middlefield-p

A. B., Stanford, 1914.

†Fisher, Arthur Lawrence, Surgery, 3333 Jackson, SF-sf

B. S., California, 1896; M. D., Johns Hopkins, 1900. Resident House Officer, Johns Hopkins Hospital, 1900-01; Fellow, Rockefeller Institute for Medical Research, 1901-02; Assistant Visiting Surgeon, Mt. Zion Hospital, San Francisco, 1902-08.

[2]Florence, Laura, Entomology, 5 Salvatierra

M. A., Aberdeen, 1907, B. Sc., 1909.

Foster, Marjorie Greene, Pharmacology, 2565 Washington, SF-sf

A. B., Stanford, 1914.

†Gage, Edmund Vernon, Romanic Languages, 230 Kellogg-p

A. B., Harvard, 1899; A. M., Pennsylvania State College, 1908.

[1]Gardiner, Joyce Ada, Zoology, 425 Florence-p

A. B., Stanford, 1915.

[1]Haas, Sylvan Lewis, Surgery, 2299 Sacramento, SF-sf

B. S., University of California, 1904; M. D., Johns Hopkins Medical School, 1908.

Hadden, Elizabeth, Chief of Order Department, Lib., 1157 Ramona-p

Hammond, Philo Fay, Physics, 467 Everett-p

A. B., Washington, 1907.

Hannibal, Edna Anne, Zoology, 24 Roble

A. B., Stanford, 1915.

†Harbaugh, Ross Wallace, Surgery, Union Square Bldg., SF-sf

A. B., Stanford, 1909, M. D., 1913. Interne, City and County Hospital, San Francisco, 1913-14; Resident Physician, St. Mary's Hospital, San Francisco, 1914-15; Stanford Assistant in Surgery, San Francisco Hospital, since 1915.

Haven, Maude Noble, Medicine, 611 Baker, SF-sf

Ph. B., California, 1894; M. D., Cooper Medical College, 1900. Assistant in Gynecological Clinic, Children's Hospital, San Francisco, 1901-05.

Hays, Alice Newman, Reference Librarian, 3 Alvarado

A. B., Stanford, 1896; B. L. S., New York State Library School, 1903. Assistant, Home Education Department, New York State Library, 1901.

Holt, Inezetta, Roble Gymnasium, 251 Hawthorne-p
A. B., Stanford, 1914.

Howe, Mollie Margaret, Assistant to Registrar, 375 Everett-p
A. B., Stanford, 1914, A. M., 1915.

†Huffaker, Anthony, Medicine, 1739 Pine, SF-sf
M. D., Cooper Medical College, 1890.

Hyde, Clarence Elmer, Surgery, 845 Sutter, SF-sf
A. B., Stanford, 1905; M. D., Columbia, 1907.

Inman, Thomas George, Medicine, 4547 California, SF-sf
Ph. G., California College of Pharmacy, 1892; M. D., Cooper Medical College, 1894. Assistant Demonstrator of Anatomy, Cooper Medical College, 1895-1900, Instructor in Applied Anatomy, 1900-11; Assistant Surgeon, St. Luke's Hospital, San Francisco, 1906-13.

[1]Kennedy, Margaret Lucretia, Roble Gym., 528 S. 2d, San Jose-sj
A. B., Stanford, 1916.

Kenney, William, Medicine, 1379 6th ave., SF-sf
M. D., University of California, 1905. Resident Physician, St. Luke's Branch Hospital, 1906-08; Resident Physician, Relief House, 1908-14; Assistant in Medicine, St. Luke's Hospital, 1905.

King, Rachel, Mathematics, 8 Lasuen
A. B., Stanford, 1914.

[2]Kirk, Josiah H., Surgery, Monadnock Bldg., SF-sf

Knollin, Ernesto Ray, Men's Gymnasium, 418 Waverley
A. B., Stanford, 1914.

†Langnecker, Harry Leslie, Surgery, 677 Melville-p
A. B., Stanford, 1901; M. D., Johns Hopkins, 1906. Orthopedic House Officer, Massachusetts General Hospital, 1908, Assistant to Orthopedic Surgeon, 1909.

Leach, Charles Nelson, Medicine, Emergency Hospital, SF-sf
A. B., Stanford, 1909, M. D., 1913.

Lothrop, Margaret Mulford, Economics, 22 Alvarado
A. B., Smith, 1905; A. M., Stanford, 1915.

von Lübtow, William August, German, 1357 Cowper
B. A., Cambridge (England), 1914. Instructor in German, Trinity College, University of Toronto, 1914-15; Lecturer on European Diplomacy, University of Denver, Summer Session, 1915.

Lund, Ralph S., Lane Library, 2884 Bush, SF-sf

McCabe, Edward Everett, Physics, 636 Waverley-p
A. B., Stanford, 1915.

[1]†Mead, Louis Durant, Medicine, 1111 Jones, SF-sf
B. S., California, 1898; A. M., M. D., Columbia University, 1902.

Mehrtens, Henry George, Medicine, 2407 Pacific ave., SF-sf
B. S., California, 1911; M. D., Stanford, 1913.

[1]†Melom, Carl Marcus, Romanic Languages, College Terrace
B. L., Minnesota, 1901, A. M., 1902.

†Moore, Harold Staats, Surgery, 1547 Jackson, SF-sf
M. D., Medical College of Indiana, Purdue University, 1898. Assistant, Indianapolis City Clinic; Assistant Surgeon, U. S. A., 1898-1901; Assistant, Ear, Nose, and Throat Clinic, Cooper Medical College, 1910.

Noddin, Ralph Ernest, Botany, Los Gatos-lg
B. S., California, 1912.

Oberlé, Eugene Jean, Romanic Languages, 611 Bryant
A. B., Stanford, 1915.

Ophüls, Louise, Librarian, Lane Medical Library, 2186 California, SF-sf

Park, Charles V., Chief of Loan Desk, Library, 707 Bryant
A. B., Stanford, 1909.

†Peck, Allan Earle, Surgery, 1401 Emerson-p
A. B., Stanford, 1898; M. D., Cooper Medical College, 1900.

Poindexter, Emily Virginia, Greek, 36 Lasuen
A. B., Stanford, 1915.

Rausch, Flora Marie, Greek, Women's Club House
A. B., Stanford, 1914.

[2]†Reed, Alfred Cummings, Medicine, 2131 Lyon, SF-sf
A. B., Pomona, 1906; M. D., Bellevue Medical College, 1910. Instructor in Pharmacology, Bellevue Medical College, 1910-11; Assistant Surgeon, U. S. Public Health Service, 1911-13; Attending Physician, Yale Hospital, Changsha, China, 1913-15.

Richards, Dexter Newell, Surgery, 2251 Telegraph ave., Berkeley-b
A. B., Stanford, 1907; M. D., Harvard Medical School, 1911. Assistant Surgeon, St. Luke's Hospital, San Francisco, since 1913.

Rouiller, Marcelle Henriette, Romanic Languages, 431 Channing-p
A. B., Stanford, 1915.

†Rumwell, Melville E., Surgery, 3323 Clay, SF-sf
M. D., Cooper Medical College, 1895.

Schnetzler, Stanley Stolz, Stenographer to President, 252 University

Sellards, John Armstrong, Romanic Languages, 25 Salvatierra
A. B., Illinois, 1912.

†Sewall, Chester Durbin, Medicine, Clift Hotel, SF-sf
M. D., Cooper Medical College, 1906.

[2]Shortlidge, Edmund D., Surgery, 401 Lake, SF-sf
M. D., Pennsylvania, 1894. Resident Physician, Emergency Hospital, Washington (D. C.), 1894-95, St. Christopher's Hospital for Children, Philadelphia, 1896, Will's Eye Hospital, Philadelphia, 1897-98; Assistant Surgeon, United States Army, 1900-08; Surgeon in Chief, Eye, Ear, Nose, and Throat Service, French Hospital, San Francisco, 1911-15.

[1]Simonson, Stanley Stoddard, Student Adviser, 8 Salvatierra
A. B., Stanford, 1916.

Stearn, Allen Edwin, Chemistry, 80 Encina
A. B., Stanford, 1915.

Sutliff, Helen Binninger, Chief Cataloguer, Library, 19 Salvatierra
A. B., Kansas, 1890. Head Cataloguer, University of Kansas Library, 1891-1905; Cataloguer in Columbia University Library, Summer, 1901.

Tupper, Roland Beatty, Medicine, 297 Church, SF-sf
M. D., Cooper Medical College, 1910. Assistant Visiting Physician, St. Luke's Hospital, 1912; Assistant in Pediatrics, Cooper Medical College, 1912.

[2]Turpin, Jere, Romanic Languages, 431 Kipling-p
A. B., Stanford, 1912.

Ulrey, Dayton L., Physics, Ravenswood
A. B., Indiana, 1911; A. M., 1912.

Watanabe, Walter K., Pharmacology, 2039 Pine, SF-sf
A. B., Stanford, 1914.

Wiggins, John Henry, Men's Gymnasium, 626 Everett-p
A. B., Stanford, 1911.

†Woolsey, Chester Howard, Surgery, 2730 Broderick, SF-sf
B. S., California, 1895; M. D., 1901. Assistant to Chair of Clinical Medicine, University of California, 1902-06; State Bacteriologist, California, 1903-04; Assistant to Chair of Genito-Urinary Surgery, Cooper Medical College, 1911-12.

Ziser, George J., Chemistry, 178 Encina
A. B., Stanford, 1915.

ORGANIZATION

Foundation

THE Leland Stanford Junior University was established under an Act of the Legislature, approved March 9, 1885, entitled "An Act to advance learning, the arts and sciences, and to promote the public welfare by providing for the conveyance, holding, and protection of property, and the creation of trusts for the founding, endowment, erection, and maintenance within this State of universities, colleges, schools, seminaries of learning, mechanical institutes, museums, and galleries of art." The Founding Grant, executed November 11, 1885, was made public at a meeting of the Board of Trustees, held in San Francisco, November 14, 1885. The cornerstone of the inner quadrangle was laid May 14, 1887, and the institution opened to students October 1, 1891.

Nature, Object, and Purposes of the University

'We, Leland Stanford and Jane Lathrop Stanford, husband and wife, grantors, desiring to promote the public welfare by founding, endowing, and having maintained upon our estate known as the Palo Alto Farm, and situated in the Counties of San Mateo and Santa Clara, State of California, United States of America, a university for both sexes, with the colleges, schools, seminaries of learning, mechanical institutes, museums, galleries of art, and all other things necessary and appropriate to a university of high degree, to that end, and for that purpose, do hereby grant,' etc.

'And that the trust hereby created may be executed according to the wishes of the grantors and each of them, they do hereby designate the Nature, Object, and Purposes of the Institution hereby founded, to be:

'Its nature, that of a University, with such seminaries of learning as shall make it of the highest grade, including mechanical institutes, museums, galleries of art, laboratories, and conservatories, together with all things necessary for the study of agriculture in all its branches, and for mechanical training, and the studies and exercises directed to the cultivation and enlargement of the mind;

'Its object, to qualify students for personal success and direct usefulness in life;

'And its purpose, to promote the public welfare by exercising an influence in behalf of humanity and civilization, teaching the blessings of liberty regulated by law, and inculcating love and reverence for the great principles of government as derived from the inalienable rights of man to life, liberty, and the pursuit of happiness.'

Name of the University

'Since the idea of establishing an institution of this kind for the benefit of mankind, came directly and largely from our son and only child, Leland, and in the belief that had he been spared to advise as to the disposition of our estate, he would have desired the devotion of a large portion thereof to this purpose, we will that for all time to come the institution hereby founded shall bear his name, and shall be known as The Leland Stanford Junior University.'

Management and Control of the University

The general management and control of the institution is vested in a Board of Trustees originally numbering twenty-four, and chosen for life. By the Amending Act of May 31, 1899, the number of trustees is reduced to fifteen, with future elections for a term of ten years. The Board of Trustees fills all vacancies.

Powers and Duties of the Trustees

'The Trustees shall have power and it shall be their duty:

'To appoint a President of the University, who shall not be one of their number, and to remove him at will.

'To fix the salaries of the President, Professors, and Teachers, and to fix them at such rates as will secure to the University the services of men of the very highest attainments.

'To establish and maintain at such University an educational system which will, if followed, fit the graduate for some useful pursuit, and to this end to cause the pupils, as early as may be, to declare the particular calling which in life they may desire to pursue. . . .

'To prohibit sectarian instruction, but to have taught in the University the immortality of the soul, the existence of an all-wise and benevolent Creator, and that obedience to His laws is the highest duty of man.

'To have taught in the University the right and advantages of association and coöperation.

'To afford equal facilities and give equal advantages in the University to both sexes.

'To maintain on the Palo Alto estate a farm for instruction in agriculture in all its branches.

'The Board of Trustees shall annually report all their proceedings to the person who for the time being shall fill the office of Governor of the State of California, and shall accompany such report with a full account of their financial operations for the preceding year, and with a statement of the financial affairs of the institution.'

Powers and Duties of the President

'It shall be the duty of the Trustees to give to the President of the University the following powers:

'To prescribe the duties of the professors and teachers; to remove professors and teachers at will; to prescribe and enforce the course of study and the mode and manner of teaching; such other powers as will enable him to control the educational part of the University to such an extent that he may justly be held responsible for the course of study therein and for the good conduct and capacity of the professors and teachers.'

Amendments to the Founding Grant

A clause in the Founding Grant reserved to the grantors the right to alter, amend, or modify the terms and conditions of the grant in important particulars. Under this provision amendments were made by Mrs. Stanford, June 1, 1897; May 31, 1899; March 28, 1902; October 3, 1902; June 1, 1903. These amendments were concerned mainly with matters of detail, but provided also "that the number of women attending the University as students shall at no time ever exceed five hundred."

An Amendment to the Constitution of the State of California, adopted November 6, 1900, "permitted, approved, and confirmed all the trusts, estates, terms, and conditions" of the Founding Grant and of all the deeds, conveyances, and other instruments made and delivered before that date, and authorized the Legislature, under certain conditions, to exempt the property of the University from taxation. Article 13 of the State Constitution, as amended November 3, 1914, exempts from taxation the buildings, grounds (not exceeding one hundred acres), equipment, securities, and income, used exclusively for educational purposes, of any educational institution of collegiate grade not conducted for profit.

The University Faculty

'The Trustees shall constitute the President and professors the faculty of the University, and shall prescribe their powers and duties as such.'

Under the Articles of Organization, adopted by the Board of Trustees March 31, 1904, the power and authority of the University Faculty is vested in the Academic Council, consisting of the President of the University, the professors and associate professors, the librarian, the registrar, the academic secretary, such assistant professors as have been upon the roll of the faculty for three years, whether as assistant professors or instructors, and such other officers of the University or members of the teaching staff as the Academic Council may, with the assent of the Board of Trustees, determine.

All general University regulations, statutes, and rules as to matters within the province of the faculty, must be initiated in and passed by the Academic Council. The Academic Council has general power and responsibility for the internal administration of the University, subject to express provisions contained in the Articles of Organization respecting the methods of exercising such powers through the President of the University, the Advisory Board, the Standing Committees, and the Department Faculties.

The Advisory Board consists of nine members of the rank of professor, one from each of the five department groups, and four chosen without reference to groups. All executive acts of general importance, such as recommendations for appointments, promotions, and dismissals, for the creation of new departments or chairs, etc., must be submitted by the President to the Advisory Board. The Advisory Board is also privileged to make such recommendations to the President, regarding policy, as it may decide by vote to be expedient, but no recommendations for appointments, promotions, or dismissals, may originate with the Advisory Board.

The Executive Committee of the Academic Council consists of the President, Vice-President, Registrar, and two members from each department group elected by the Academic Council. The Executive Committee appoints the Academic Committees of the Council.

The Standing Administrative Committees of the Council are appointed by the President.

The Department Faculties consist of the professors, associate professors, assistant professors, and instructors in the several departments, but only members of the Academic Council have the right to vote. A

Department Faculty has direction of the work of instruction in the department and of the internal administration of the department, subject only to such control as is vested in the Board of Trustees, the President of the University, and the Academic Council. The Executive Head of the Department Faculty is designated by the President with the approval of the Advisory Board and of the Board of Trustees.

Departments

The work of the University embraces the following departments, divided into groups for the purpose of elections to the Advisory Board and Executive Committee, as indicated:

(I) Greek, Latin, Germanic Languages, Romanic Languages, English; (II) Botany, Physiology and Histology, Zoology, Entomology and Bionomics, Medicine, Anatomy, Bacteriology and Immunity; (III) Psychology, Mathematics, Physics, Chemistry, Geology and Mining; (IV) Philosophy, Education, History, Economics, Law; (V) Applied Mathematics, Civil Engineering, Mechanical Engineering, Electrical Engineering.

The Marine Biological Laboratory, founded by the liberality of Mr. Timothy Hopkins, and located at Pacific Grove, on the Bay of Monterey, is a branch of the biological work of the University.

Location

The seat of the University, except for the advanced and clinical work in Medicine, is at Stanford University, in the Santa Clara Valley, thirty miles southeast of San Francisco, on the Coast Division of the Southern Pacific Railway. The grounds of the University consist of over seven thousand acres, partly level and partly rising into the foothills of the Santa Cruz Range. The Bay of San Francisco lies about three miles east of the University grounds. Across the bay the Monte Diablo Range rises to a height of over four thousand feet, the Lick Observatory crowning Mt. Hamilton, the highest of the range. The Santa Clara Valley is one of the most attractive portions of the State in fertility, in natural beauty, and in the excellence of its climate. In winter the mercury rarely falls below 30 degrees, with an average midday temperature of about 55 degrees. In summer the midday temperature ranges between 60 degrees and 80 degrees, with occasional higher and lower numbers, the average being about 70 degrees; the nights are cool, the usual range being from 50 degrees to 58 degrees. The rainfall, normally about eighteen inches, is chiefly confined to the months from December to April, inclusive.

Buildings

The central group of buildings, constituting two quadrangles, the one surrounding the other, is an adaptation of the Mission Architecture, and reproduces on an imposing scale the open arches, long colonnades, and red tile roofing of the old Spanish Missions of California. The Inner Quadrangle consists of twelve one-story buildings and the Memorial Church, connected by a continuous open arcade, and surrounding a court 586 feet long by 246 feet wide, or three and a quarter acres. The buildings are of buff sandstone, somewhat varied in color, the stonework of broken ashlar, with rough rock-face, and the roofs covered with red tile.

The fourteen buildings of the Outer Quadrangle are constructed of the same material and in the same general style as the Inner Quadrangle, with open arcades on the outside. The extreme length of the Outer Quadrangle is 894 feet.

The Leland Stanford Junior Museum, situated a quarter of a mile from the Quadrangles, on the west side of the Palo Alto Avenue, contains the archæological and art collections of the University.

The Chemistry Building, located between the Quadrangles and the Museum, consists of two separate structures—the main building and the Assaying Laboratory.

Behind the central quadrangles are located the workshops of the Engineering departments, experimental laboratories, etc.

The dormitories are east and west of the Quadrangles. Encina Hall, for men, is at the east, and has accommodations for three hundred students. Roble Hall, for women, is at the west, and will accommodate one hundred students. Madroño Hall, a frame building, at present leased to private parties, receives only women students. It will accommodate about thirty students.

The Men's Gymnasium is a brick building with a frontage of 330 feet, situated north of Encina Hall and near the athletic grounds. There are two main divisions separated by a small court. The drill hall is 120x65 feet, with hard maple floor. There are rooms for special exercises, shower and locker rooms in each wing, ample offices, and space for storage and laundry.

Roble Gymnasium for women is a frame building equipped with the apparatus and appliances for physical training.

The University Inn is a frame building intended primarily as a University commons for students living on the campus.

The grounds immediately about the University have been reserved

in part for experimental and ornamental purposes, in part as residence sites for members of the Faculty and others who may desire to live on the University campus.

The buildings of the MEDICAL DEPARTMENT in San Francisco occupy four fifty-vara lots bounded by Clay, Sacramento, and Webster streets, and consist of the Clinical and Laboratory Building; Lane Hospital, a modern building in brick and stone, with a capacity of one hundred and eighty beds; the Nurses' Home; and the Lane Library, a fireproof structure of Colusa sandstone, three and a half stories high, with steel stacks accommodating 60,000 volumes.

The buildings of the MARINE BIOLOGICAL LABORATORY are located at Pacific Grove. They consist of two two-story structures, and contain four general laboratories, one lecture room, seventeen private rooms for investigation, and a dark room for photography.

CLUB-HOUSES

The STANFORD UNION is a club-house for men, first projected by Herbert C. Hoover of the class of 1895, and built by contributions from students, alumni, faculty, trustees, and friends of the University. The Union was opened in February, 1915, and is in charge of a Board of Trustees made up of two faculty members, three alumni, and two undergraduates.

The WOMEN'S CLUB-HOUSE provides a social center for the women of the University, and is similar in plan and construction to that of the Union. The club-house was opened in February, 1915.

ADMISSION TO THE UNIVERSITY

CANDIDATES must be at least sixteen years of age. They must present satisfactory recommendations as to personal character and must offer approved credentials as indicated below. Application forms for candidates from other colleges and universities, and recommendation blanks for candidates from preparatory schools, may be obtained on application to the Registrar.

Special Regulations Governing Admission of Men.

Beginning with August, 1916, candidates for admission approved by the Committee on Admission and Advanced Standing will be classified in four groups, as defined below. Those placed in Groups I and II will be admitted without numerical restriction. In Groups III and IV the number of matriculants will be limited to a maximum of 450 for the first semester and 50 for the second semester. For the present those placed in Group III are assured of admission. No additions to Group III will be made after August 1st (for the August-September matriculation) and December 20th (for the January matriculation). Credentials of lower division candidates not placed in Group III will be canvassed after August 1st and December 20th respectively; those approved by the Committee will be placed in Group IV and will be certified for admission in order of merit until the limit fixed has been reached.

Group I: Graduate Standing.—Graduates of colleges and universities of recognized standing whose credentials evidence ability and promise and who expect to become candidates for advanced degrees, or for the high school teacher's certificate, or who purpose to pursue regular advanced, professional, or research courses.

Group II: Undergraduate Standing (Upper Division).—Students from colleges and universities of recognized standing whose previous record has been thoroughly satisfactory, and who present credentials showing full satisfaction of requirements for undergraduate standing and the completion of college courses amounting to 45 or more units.

Fully recommended graduates of State Normal Schools and of other normal schools of equal standing, and advanced students from the High School Junior Colleges, may also be placed in Group II.

Group III: Undergraduate Standing (Lower Division A).—

(1) *On Examination.* Candidates who have passed the regular entrance examinations of the College Entrance Examination Board in subjects aggregating fifteen units; or who have passed the comprehensive examinations in four subjects designated by the University. Permission to take the comprehensive examinations will be based upon the completion with credit of a four years' high school course or its equivalent; at least two of the examinations must be of an advanced character.

(2) *On Recommendation.* Graduates of approved preparatory schools who have attained recommending grades in subjects aggregating fifteen entrance units. In schools which do not distinguish between a passing and a recommending standard the average grade must be at least ten per cent above the lowest passing grade, and no grade shall be acceptable unless it be at least five per cent above the lowest passing grade.

Holders of New York Regents' Diplomas granted *with credit,* and candidates from China, Japan, and other foreign countries who present credentials equivalent to those named above, and whose command of written and spoken English shall be deemed adequate for purposes of college study, may also be placed in this category.

(3) *On College Credentials.* Students from colleges and universities of recognized standing whose previous record has been thoroughly satisfactory, and who present credentials showing full satisfaction of requirements for undergraduate standing and the completion of college courses amounting to less than 45 units.

Group IV: Undergraduate Standing (Lower Division B).—

(1) Candidates of approved preparatory schools who have not obtained recommending grades in the requisite number of subjects, but who are recommended in fifteen units on the basis of a general high average or decided intellectual promise.

(2) Men of considerable maturity, twenty-one years of age or older, who do not fulfill the requirements for regular undergraduate standing, but whose incomplete preparation has been supplemented by practical training and experience of distinct educative value.

(3) Candidates from other colleges and universities who do not fully meet the requirements under Group III, but who nevertheless give promise of thoroughly successful work.

(4) Candidates ordinarily classified in Group III whose credentials are received after August 1st and December 20th respectively.

Special Regulations Governing Admission of Women

The Founding Grant of the University, as amended May 31, 1899, directs "that the number of women attending the University as students shall at no time ever exceed five hundred." In conforming to this provision the following plan of admission has been adopted:

Women once admitted to the University will be allowed to continue without further application, so long as scholarship and conduct are satisfactory, and provided they present themselves for registration on the regularly appointed days. Places will not be held for women students after the regular registration days, except by permission of the Committee on Registration granted in advance.

The same scholarship standards apply as in the case of men.

Graduates of other colleges and universities of recognized standing may be placed upon the Preferred List provided they make formal application (on blanks to be obtained of the Registrar) not later than August 15th for the August-September matriculation, and not later than December 20th for the January matriculation, and provided credentials are filed by the dates named.

Candidates for undergraduate standing whose credentials, besides fulfilling the entrance requirements of the University, indicate exceptionally high scholarship and special fitness, may also be placed on the Preferred List at the discretion of the Committee on Admission, provided application is made and credentials filed by July 10th (for the August-September matriculation) and by October 10th (for the January matriculation).

The Preferred List will be begun and closed for undergraduates immediately after July 10th and October 10th respectively. All candidates on the Preferred List are assured of admission if present on the regularly appointed registration days.

For all other candidates Numbered Lists will be begun July 10th (for the August-September matriculation) and October 10th (for the January matriculation). Candidates whose credentials are complete and in the hands of the Registrar on the dates specified will be given numbered admission cards in the order of original application. (These numbered cards will be mailed to candidates about the middle of July, or October, as the case may be). After the first lists are made up additional numbered cards will be issued in the order in which the requirements are fulfilled, the order of original application applying where the complete credentials of more than one candidate are received on the same date.

On registration day candidates on the numbered list will register according to their serial order and to the estimated number that will not exceed the 500 limit. Should this estimate prove too high the necessary cancellations will be made on the following day, beginning with the highest number. If less than 500 women shall have registered at the close of the regular registration period, others on the numbered list will be permitted to register, in their serial order, until the full number is complete.

Complete credentials comprise: for *first-year standing,* (1) formal application, (2) fifteen accepted entrance units; for *advanced standing,* (1) formal application, (2) full certified statement of college record, including entrance credits, (3) letter of honorable dismissal; for *graduate standing,* (1) formal application, (2) diploma or certificate of graduation.

Entrance Units

An Entrance Unit represents a year's study in any subject in a secondary school, constituting approximately one quarter of a full year's work. In assigning credit values two laboratory, drawing, or practice periods, not requiring additional study or preparation, are regarded as the equivalent of one recitation period. The length of the school year is assumed to be from thirty-six to forty weeks.

Approved Preparatory Schools

Approved Preparatory Schools are schools maintaining full four years courses of high school work and accredited (1) by The New England College Entrance Certificate Board, by The North Central Association of Colleges and Secondary Schools, by colleges and universities of recognized standing, or (2) upon inspection undertaken or authorized by the University.

The University records of first-year students will be considered as additional evidence of the standing of preparatory schools and of their good faith and success in meeting the requirements of the University, and such evidence will be made use of in determining as to the continuance of accrediting relations.

Entrance on Examination

The University holds no entrance examinations, and does not admit students with entrance deficiencies. In general, candidates are advised to remain in the preparatory school until they fulfill the requirements for admission on recommendation; but if prepared to enter on examination, or desiring to supplement incomplete recommendation, they should

take the examinations of the College Entrance Examination Board which are held simultaneously in all parts of the United States and in various foreign countries.

In 1916 the entrance examinations of the College Entrance Examination Board will be held June 14-19 (in California, at Stanford University, Berkeley, Los Angeles, and other places.)

All applications for examination must be addressed to the Secretary of the College Entrance Examination Board, Hamilton Hall, Post-Office Station H, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application.

If the application is received sufficiently early the examination fee will be $5.00 for candidates examined in the United States and Canada and $15.00 for candidates examined outside of the United States and Canada. The fee should be remitted by postal order, express order, or draft on New York to the order of the College Entrance Examination Board.

The applications and fees of candidates who wish to be examined outside of the United States and Canada must reach the Secretary of the Board at least five weeks in advance of the first day of the examinations, that is, on or before Monday, May 15, 1916.

The applications and fees of candidates who wish to be examined in the United States at points west of the Mississippi River must be received at least three weeks in advance of the examinations, that is, on or before Monday, May 29, 1916.

The applications and fees of candidates who wish to be examined in the United States at points east of the Mississippi River or on the Mississippi River must be received at least two weeks in advance of the first day of the examinations, that is, on or before Monday, June 5, 1916.

When the candidate has failed to obtain the required blank form of application for examination the usual examination fee will be accepted if the fee arrive not later than the specified date accompanied by a memorandum containing the name and address of the candidate, the examination centre at which he wishes to present himself, and a list of all the subjects in which he may have occasion to take the Board's examinations.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon the payment of $5 in addition to the usual fee.

A list of the places at which examinations are to be held by the Board is published about March 1st of each year. Requests that the examinations be held at particular points, to receive proper considera-

tion, should be transmitted to the Secretary of the Board not later than February 1st.

In these examinations the University will accept a mark of 60 as the lowest passing grade.

A Definition of Requirements in the various subjects in which examinations are held is given in Document No. 72, issued by the Board. (Price 10 cents: address Secretary, College Entrance Examination Board, Hamilton Hall, Post-Office Station H, New York, N. Y.)

Entrance Subjects

The standard of preparation is the four years' high school course. The proper co-ordination of high school subjects for the individual pupil is regarded as primarily a problem for the secondary school; the University is prepared to recognize for entrance credit any subject having an established place in the secondary school curriculum, in which adequate instruction is given and which is pursued to satisfactory results.

No prescription, other than English, is made. Candidates desiring to study mathematics must obviously offer such elementary mathematics as is not taught in the University, and engineering students are expected to offer also solid geometry and trigonometry. Candidates desiring to study Latin should offer at least two entrance units in that subject.

All first-year undergraduates (including special students, and students coming from other institutions with less than twenty units of advanced credit) will be required to satisfy the University standard in English Composition. This may be done by passing a special Matriculation Test given during matriculation week. The examination will test the candidate's ability to write exercises not only free from marked deficiencies in spelling, punctuation, sentence structure, and paragraphing, but also indicative of his ability to think consecutively on a simple subject. The subjects which are set at the time of the examination will be drawn for the most part from the candidate's own experiences.

A student who passes this test may be exempted from Composition work in the University, or may enter Course 2 in the Department of English. A student who does not pass will be required to register in English A at once (unless, by reason of numbers, such registration is postponed to a later semester), and remain in the course until his work is of passing grade. Some students, whose work shows exceptional promise of maturity, may be assigned to English 2 instead.

DEFINITION OF HIGH-SCHOOL SUBJECTS

The definition of high-school subjects given by the College Entrance Examination Board (Document No. 72 issued by the Board) will serve as a standard, and also, for California schools, the outline prepared by the University of California. The following suggestions and explanations will indicate the attitude of the University in judging entrance credentials, but no attempt is made to enumerate all the subjects which may be properly included in the high school curriculum.

1. English.—The work in English Composition should be given at least two recitations a week throughout the entire high school course. The greater part of this time should be devoted to practice in writing, but it is recommended that some attention be also paid to instruction in the fundamental principles of formal rhetoric.

The work in English Literature should be given an average of at least three recitations a week throughout the four years of the preparatory course. It should be so conducted as to give the student not only an appreciative understanding of the books selected either for general or for more intensive study, but also a knowledge of their place in the history of English Literature, and especially an ability to read aloud intelligently both prose and verse.

In the History of English Literature preparation should consist in a brief outline with a view to making clear the character and the tendencies of the more important literary epochs and associating the chief books and authors in their proper periods.

2. Mathematics.—The work in Mathematics is usually distributed as indicated by the following unit values: algebra (1 to 2), plane geometry (1), solid geometry (½), trigonometry (½). Additional work may be offered in algebra and plane analytical geometry. The solution of numerous original problems and exercises is assumed throughout the course.

3. The Sciences.—In Physics, Chemistry, Physiology, Botany, Zoology, Hygiene, and General Science a full year's work in each is expected, comprising, preferably, two recitation periods and three double laboratory periods per week. Accurate notes of the laboratory work should be kept. Any two of the biological sciences (Physiology, Botany, Zoology) may be combined into a continuous year's course. Astronomy may be offered as a half-unit course.

Students who receive entrance credit in Chemistry, and who wish to continue the subject in the University, will be admitted at once to course *a*11 and will be required to begin course 1.

In Physiology the text-book work should be accompanied by experiment, dissection of animals and organs, and a certain amount of study of the tissues with the microscope.

In Botany the main thing is that the work shall be of a practical nature; that the study be mainly specimens and not books. A study of the growth and development of the forms selected is of the highest importance, and should be made a prominent feature in the work. If possible, the pupil should be allowed the use of a compound microscope; but when this is not practicable, microscopic demonstrations by the instructor are indispensable.

In Hygiene the work should include adequate instruction in personal hygiene, the hygiene of occupation, and the relation of the citizen to the State in matters of sanitation and public health. Three periods per week of physical training and three periods in experimental laboratory work in Hygiene, and two recitations per week on Public Health, or an equivalent amount of work distributed over a longer period, will cover the requirements for one unit of credit.

4. History and Allied Subjects.—History should be offered in full unit courses covering respectively the following divisions: (*a*) Ancient, (*b*) Mediaeval and Modern, (*c*) English, (*d*) American. Civics may be offered as a part of American history, or as an additional half-unit course. Biblical History and Literature and Economics may each be offered as a half-unit or as a unit course.

In the History subjects, in addition to the text-book preparation, the following exercises are recommended: Supplementary reading, including the use of original material where possible, notes and digests of reading; abstracts or analyses of specified chapters, both of the text-book and supplementary reading; outlines of subjects, gathering material from all available sources; map drawing from printed data or comparison of existing maps, showing movements of exploration, migration or conquest, territorial changes, or social phenomena. Such work should be regarded as a means rather than the end of historical study, and in every instance should be adapted in character and amount to the stage of advancement of the class and of the individual pupil. As the pupil progresses in his study, more advanced work may well be required in the form of historical composition, and of note-taking in the class from talks by the teacher or reports of fellow pupils.

5-6. Spanish and French.—The elementary study of the languages, covering two years of daily recitations, should lay stress on the following points: (1) An accurate knowledge of the forms of

the languages; (2) The elements of syntax; (3) The ability to turn easy English prose into French or Spanish; (4) The ability to translate ordinary French or Spanish into idiomatic English; (5) The ability to pronounce French and Spanish correctly.

The Intermediate requirements are intended to represent a third year of daily recitations. The specific demands are: (1) A thorough knowledge of modern French and Spanish syntax; (2) the ability to turn ordinary modern French and Spanish at sight into idiomatic English; (3) the ability to translate connected English prose of moderate difficulty into French or Spanish; (4) the ability to write French or Spanish from dictation; (5) some facility in speaking the languages.

The Advanced requirements will occupy a fourth year of daily recitations. At the end of this course the student should be able: (1) to read at sight any standard author not earlier than the seventeenth century; (2) to write in French or Spanish a short essay on some simple subject connected with the works read; (3) to translate correctly a passage of modern English prose; (4) to carry on a simple conversation in French or Spanish; (5) to follow a lecture in French or Spanish.

The reading in the Elementary course should cover from four hundred to six hundred duodecimo pages; in the Intermediate course a similar amount should be read of prose and verse, a portion to be in the dramatic form; and in the Advanced course the same quantity of prose and verse should be selected from standard authors not earlier than the seventeenth century, and these should be read with reference to their literary value.

The practice of writing compositions consisting in reproductions or paraphrases of the matter read should be begun in the Intermediate course and followed by short themes along similar lines in the Advanced course.

7. German.—The elementary study of the language, covering two years of daily recitations, should include the following requirements: The ability to read understandingly easy German prose and verse at sight; an accurate knowledge of the most important elements of grammar, embracing especially inflections, word-order, and the essentials of syntax, as also the ability to appreciate the force of prefixes and suffixes; the ability to express in correct German simple ideas concerning familiar things; the ability to make oral use of the German learned and to recognize German words and simple sentences when spoken. Careful attention should be given to pronuncia-

tion and accentuation, in order to insure the power to read German fluently and intelligently.

This preparation is represented, approximately, *in reading,* by material of the character of Thomas and Hervey's Reader, and the careful study of one or more modern dramas (about two hundred duodecimo pages of easy German), supplemented by the reading of German lyrics and ballads, a number of which should be memorized; *in composition,* by daily practice in reproducing in one form or another the German read and in writing in German.

Intermediate German represents a third year of daily recitations covering the following requirements: The ability to read intelligently ordinary German prose and verse at sight; some knowledge of word-formation and derivation; practical familiarity with the principles of syntax, with special reference to the uses of the tenses and cases, the modal auxiliaries, and the moods; increased ability to write and speak German.

It is believed that this preparation can be acquired by continued practice such as is suggested above, in connection with the careful reading of five hundred duodecimo pages of contemporary and classical prose and verse, in addition to the reading required for Elementary German. It is recommended that about one-half of this reading be selected from the works of living or recent writers, such as Otto Ernst, Storm, Keller, Freytag, etc.; and the other half from such classics as Lessing's Minna von Barnhelm, Schiller's Wilhelm Tell, and Goethe's Wahrheit und Dichtung. Particular attention should be paid to the literary value of the works read. It is also desirable that candidates should acquire the ability to understand and take part in a recitation conducted in German.

Advanced German represents a fourth year covering, in addition to the preparation in Elementary and Intermediate German, the following requirements: A firmer hold on the important elements of German Grammar; a thorough knowledge of at least two of the following classics: Goethe's Hermann und Dorothea or his Iphigenia, Lessing's Nathan der Weise, and Schiller's Wallenstein, as well as of two or more recent dramas, all of which should be studied as much as possible with an eye to the appreciation of their literary value; some familiarity with the technical language of literature and science; the ability to compose in German with ease and to follow lectures delivered in German.

8. Latin.—The reading required in elementary and advanced Latin (4 units), without regard to the prescription of particular authors

and works, is not less *in amount* than Caesar, Gallic War, I-IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias; Virgil, Aeneid, I-VI. An equivalent amount of reading from authors other than these specified above may be substituted. The following are suggested: Caesar, Civil War; Eutropius; Nepos; Terence, Phormio; Cicero, Letters; Sallust; Virgil, Bucolics and Georgics; Ovid, Metamorphoses.

Exercises in translation at sight should begin in school with the first lessons in which Latin sentences of any length occur, and should continue throughout the course with sufficient frequency to insure correct methods of work on the part of the student. From the outset particular attention should be given to developing the ability to take in the meaning of each word—and so, gradually, of the whole sentence—as it stands; the sentence should be read and understood in the order of the original, with full appreciation of the force of each word as it comes, so far as this can be known or inferred from that which has preceded and from the form and position of the word itself. The habit of reading in this way should be encouraged and cultivated as the best preparation for all the translating that the student has to do. No translation, however, should be a mechanical metaphrase. Nor should it be a mere loose paraphrase. The full meaning of the passage to be translated, gathered in the way described above, should finally be expressed in clear and natural English.

The school work in Latin should include much reading aloud, writing from dictation, and translation from the teacher's reading. Learning suitable passages by heart is also very useful, and should be practiced.

The work in composition should give the student a better understanding of the Latin he is reading at the time, if it is prose, and greater facility in reading. It is desirable, however, that there should be systematic and regular work in composition during the time in which poetry is read as well; for this work the prose authors already studied should be used as models.

9. Greek.—In Elementary Greek (2 units) the following requirements should be covered: Grammar, the inflections and the essential points of syntax; Xenophon's Anabasis, Books I-IV, or an equivalent; prose composition. It is expected of every pupil that he be able to read Greek aloud without stumbling.

In Advanced Greek (1 unit): Homer, Iliad, Books I-III, or an equivalent; advanced prose composition. The pupil should have a good acquaintance with the forms and syntax of Homer, and be able

to scan any given passage exactly and to read it rhythmically. In the writing of Greek the pupil should have a year's training beyond that required in Elementary Greek.

10. Drawing and Applied Art.—In each of the drawing subjects (Freehand, Mechanical, and Architectural) a unit of credit represents daily double periods for a year or single periods for two years.

In Freehand Drawing approximately two-thirds of the time should be given to representation and one-third to decorative and constructive design. *Representation* should include: object drawing, boxes, books, bowls, vegetables, machine parts, drawn in various positions with attention to perspective facts in line and also to light and shade; plant forms, seed pods, shells, insects, animals, and simple landscape, drawn in line, in light and shade, and in color; composition, exercises in arrangement and adaptation of pictorial subjects into good composition, using both rhythmic line arrangement and harmonious color. The style of drawing should be direct, facile and effective, adapted to the thing drawn, with refinement in its proper place and vigor in its proper place. The pupil should be equally familiar with the use of pencil and charcoal or brush. *Design* should include (1) Exercises in space filling, borders and all-over patterns with use of geometric and organic forms; (2) principles of constructive and decorative design applied to simple objects, as: in printing, a title-page or program; in textiles, a stencil or embroidery design for a curtain or table-scarf; in wood, working drawings for a chair, table, clock-case, book-rack, etc.; in metal, cabinet hardware and lighting fixtures, etc. Talks supplemented by photographs of the best paintings and architecture, and talks upon taste in home furnishing and appointments, with visits to worthy examples, should supplement the course, with a view to developing an enlightened taste in art.

In Mechanical Drawing the pupil is expected to acquire neatness and accuracy in the use of drawing instruments. This course should include practice in line work, lettering, machine or architectural working drawings, and tracing. Recognition, commensurate with the length of course and the degree of proficiency attained in the use of instruments, will be given, however, to courses consisting of line work, lettering, and the construction of geometric figures.

11. Shopwork.—Two things are expected: First, a knowledge of the materials and tools used, and a thorough understanding of the principles involved in the operation performed; second, manual dexterity, as evidenced by neatness, accuracy, and despatch in the execution of a given piece of work.

Woodworking (½ unit) demands the ability to recognize the common varieties of wood, and some knowledge of their physical properties, such as ease of working, strength, toughness, hardness, etc., is expected. The pupil should be familiar with the uses of the principal hand tools of carpentry and with their care, be able to make the ordinary kinds of joints and splices, and be familiar with the operation of the lathe, jig-, band-, and circular-saws, and planing machines.

Forge Work (½ unit) demands an elementary knowledge of the properties of wrought iron and steel, and of the proper heats at which to work them. The management of forge and fire and the nature and uses of all the ordinary blacksmithing tools should be known. The pupil should be able to execute all of the common forging processes, including the various forms of welds in iron and steel; he is also expected to understand hardening, tempering, and annealing.

Foundry Work (½ unit) demands a knowledge of the tools and processes used in the ordinary forms of green sand moulding and core work. The pupil should have had experience in the operation of the cupola and know how to charge and operate it. He should have a knowledge of the properties of cast iron, and experience in pouring cast iron as well as in moulding.

Machine Shop Work (½ to 1 unit) demands a knowledge of the tools and processes used in the wroking of iron, steel, and brass. The pupil should be able to execute all forms of vice-work, such as chipping, filing, scraping, fitting, and finishing. He should be familiar, through experience in operation, with the simpler forms of machine tools, such as the lathe, drilling machine, planer, shaper, and milling machine.

12-15.—In Agriculture, Horticulture, Domestic Science, Commercial Subjects, and Music the outline prepared by the University of California is suggested; also, in Music, the definition given by the College Entrance Examination Board.

FEES, EXPENSES, AND AID FUNDS

Tuition and Incidental Fees

TUITION FEES are charged in Law, for professional law courses, as follows: to students registering for thirteen or more units in law in any semester, $50 per semester; to students registering for less than thirteen units in law for any semester, $4 per unit per semester.

The Tuition Fee in the Department of Medicine is $150 per year.

An Incidental Fee of $15 per semester is charged to all registered students, with the following exceptions: (1) Those registered in the professional courses of Law and Medicine, paying tuition fees in those departments amounting to fifteen dollars or more per semester; (2) graduate students doing *bona fide* graduate work, as certified to by the departments concerned, whether as candidates for advanced degrees or not.

Students in laboratory courses pay for the materials which they use, and in various courses syllabus and other fees may be charged. Laboratory and syllabus fees are different for the different courses, ranging from $0.50 to $25 per semester.

Laboratory fees are ordinarily returnable as follows when duly claimed in writing within two months after the date of withdrawal from the University: thus, the whole amount will be refunded when the student withdraws within one week of the beginning of a semester, and one-half the amount if the student withdraws before the middle of a semester; but no fees will be refunded on account of withdrawals after the middle of a semester, nor unless claimed in writing within two months after the date of withdrawal. (This regulation is not applicable to the Department of Chemistry.)

The Guild Fee of $2 per semester is charged to all students registered in the University.

The Gymnasium Fee of $2.50 per semester is charged to all students except those registered in the Medical School in San Francisco.

A Diploma Fee of $5, payable before Commencement in May, is charged all persons receiving degrees from the University.

Cost of Living

The cost of living in Roble Hall, including board, room, light, and

heat, averages about $30 per month. Students furnish their own linen, blankets, and towels. Requests for reservation of rooms should be made to the Matron of Roble Hall.

Rooms in Encina Hall cost $6 per month, with two in a room; corner rooms, $6.50. There are a few single rooms at $8 per month. Students occupying a double room alone pay $6 per month; but no double room may be occupied by one student when there is a vacancy in any other double room. Requests for reservation of rooms should be made to the Clerk of Encina Hall.

Rooms in Encina and Roble Halls are assigned to students under lease for the full term of the college year, provided they remain students of the University. Any student, while enrolled, desiring to cancel the lease, must secure a satisfactory substitute for the unexpired term.

Students may live outside the Halls only in places approved by the University.

In Palo Alto and College Terrace, at an average distance of a mile and a quarter from the University, rooms and board, in private houses, can be obtained, at from $25 to $35 per month. A considerable number of students live in co-operative clubs, in which the cost of board and room is reduced as low as $20 per month, such rooms are lighted and heated, but usually unfurnished. Special commutation tickets are issued by the Southern Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, easily go to and from the University daily. There is also trolley connection with San Jose, Los Gatos, and intermediate towns.

On arriving at the University, new students may obtain information of rooms and board at the Information Bureau conducted by the Christian Associations. A complete list of approved rooms and boarding places is printed in August. Particular inquiries may be addressed to the secretaries of the Christian Associations.

The University Inn, located near the Quadrangle, has dining accommodations for about three hundred students.

Books and stationery will average from eighteen to twenty-five dollars per year.

The necessary expenses of the student, exclusive of clothing and railway fares and of tuition fees in Law and Medicine, range from $350 to $500 per year.

The cost of living for students of Medicine in San Francisco is about the same as at Stanford University. There are numerous rooming and boarding houses near the medical buildings.

Self-Support of Students

A considerable number of students manage, in one way or another, to earn the whole or a part of their expenses while attending the University. Such opportunities occur in the line of office and laboratory assistance, personal services of numerous kinds, the management of various student enterprises, agencies for laundries, etc.

The Student Employment Bureau (in charge of the Christian Associations) registers without charge all students who apply for employment, and supplies employers with student labor as demanded. In general, the demand and supply are nearly equal, but the attention of new students who intend to earn the whole or part of their living is called to the following results of past experience:

1. There is a constant *over-supply* of those wishing to do teaching and clerical work. None but those having superior qualifications and experience are likely to secure employment the first semester.

2. There is a considerable demand for efficient stenographers and typewriters; also for men and especially women who can do domestic labor of any kind; board and room rent may be earned by waiting on table, washing dishes, general housework, house cleaning, gardening, etc.

3. Students who can do any kind of domestic or manual labor *well*, and who have thoroughly good health, can earn their board by three hours' work per day, or board and room by four hours' work per day. Those who are bookbinders, printers, mechanics, or carpenters, will have a decided advantage in obtaining employment. *But no student is advised to come to the University without resources sufficient for the expenses of one semester.*

4. The University curriculum is adapted to those who have control of their entire time for study. The student who must earn his living, therefore, should expect to take less than the usual amount of University work.

5. No student should come expecting to earn money, who can do nothing well; skill is absolutely essential, as competition is quite as severe in the college community as elsewhere.

6. Opportunities for earning money during the summer vacations can usually be counted on, the demand for canvassers being most constant.

Particular inquiries concerning opportunities for self-support should be addressed to the Secretaries of the Y. M. C. A. or Y. W. C. A. Upon arrival at the University new students should report for registration and information to the Information Bureau of the Associations.

SCHOLARSHIPS AND ASSISTANTSHIPS

There are a number of student-assistant positions in the various departments, held by either undergraduates or graduates, ranging in pay from $500 to $100 each, the average being about $200. These do not include a considerable number of minor positions in laboratories or elsewhere where mere labor without skill or special knowledge is required, nor do they include those positions where the full time of the assistant is demanded.

Each department selects and recommends for appointment its own assistants. Requests for information as to pay and duties and applications for appointment should be addressed to the Executive Head of the department in which a position is sought.

William Burton Barber Loan Fund

Mrs. Anna M. Barber, mother of William Burton Barber, '02, has established, in memory of her son, the William Burton Barber Loan Fund "to provide for needy and worthy students," and has presented to the University for this purpose the sum of three hundred dollars. This loan fund is available for men and women members of the senior class who have been registered in the University for at least one year, but not more than one hundred dollars shall be loaned to any one student. The loan is made on the personal note of the student and is payable to the University, without interest, not later than one year after the date of graduation, or withdrawal from the University. Applications for loans should be made by personal letter to the Academic Secretary, Stanford University.

Loan and Emergency Fund for Women

The Women's Conference has established a Loan and Emergency Fund for women students which is administered by a committee of the Conference. Applications should be made to the Dean of Women.

Graduate Loan Fund

The Alumni Association of the University has established a loan fund available to graduate students under the following conditions:

1. Loans shall be restricted to candidates for advanced degrees, including the A. M., J. D., M. D., and Ph. D. degrees, preference being given to candidates for the Ph. D. degree.

2. In making loans emphasis shall be placed upon character, scholarship, and intellectual promise, in addition to personal need.

3. Loans shall be repaid not later than one year after securing the degree or withdrawing from the university.

Applications should be made to the Academic Secretary, Stanford University, California.

The Dickey Scholarship Fund

The Trustees of the University have received from the estate of the late W. J. Dickey, of Fresno, the sum of ten thousand dollars for the establishment of the Dickey Scholarship Fund "to aid young men from Fresno County, preferably from Fresno City, to make their way through Stanford University." The trustees of the Dickey Estate are Mr. Bernard Faymonville, Vice-President of the Fireman's Fund Insurance Company, San Francisco; Mr. E. A. Waldron, Cashier of the First National Bank of Fresno, and Mr. M. B. Harris, of the Fresno bar. The selection and appointment of the W. J. Dickey scholars shall be made by the President upon the recommendation of the Committee on Scholarship, subject to the provision that the trustees under the will of Mr. Dickey shall be consulted and their advice taken before any appointment is made. No one shall be appointed to a Dickey Scholarship unless he shall have been a resident of the County of Fresno, and preferably of the City of Fresno, for at least two years prior to his appointment; and no scholarship shall be held or shared by one person for more than four years.

No one shall be appointed to a W. J. Dickey scholarship unless he has fulfilled all the requirements for regular standing in the University.

Other things being equal, preference shall be given, in making appointments, to first-year students.

Appointments shall be made for the college year, but may be terminated earlier at the discretion of the committee. Appointments may be renewed at the discretion of the committee, for a total period not to exceed four years.

In making its recommendation the Faculty Committee shall keep in mind that the donor of the W. J. Dickey scholarship fund wished the benefits therefrom to be derived by persons who are financially unable to make their way through college. In addition to this fact, character, scholarship, and seriousness of purpose shall be taken into consideration in determining appointments.

The W. J. Dickey Scholarship Fund provides for two scholarships of $250 each, payable in nine monthly installments beginning September 1st.

Application for appointment to the W. J. Dickey scholarship, with pertinent evidence and testimonials, shall be made to the President of the University, who will refer it to the appropriate committee. Candi-

dates shall be recommended by the committee to the President, who will submit the names to the trustees of the Dickey estate, and upon their approval appointments shall be made by the President of the University.

Memorial Scholarship

The Leland Stanford Junior Scholarship, established by Mrs. Stanford, in 1900, pays the necessary expenses of its holder throughout the undergraduate course. A room in Encina Hall is especially reserved for occupancy by the holder of the scholarship.

The B. G. Higley ('99) Scholarship

Mr. B. G. Higley, of the class of 1899, has established, through the Alumni Association, an annual scholarship of one hundred and fifty dollars, "open to either a man or woman undergraduate student who is in good and regular standing in the University, to whom the money will be a real assistance."

The selection and appointment of the B. G. Higley Scholar will be made by the President upon the recommendation of the Faculty Committee on Scholarship. Appointments will be made for the college year, but may be terminated earlier on recommendation of the Committee and at the discretion of the President.

Applicants for the scholarship must have been registered in the University for at least two semesters prior to the time of application. In making appointments it will be the purpose of the University to emphasize character, scholarship, and intellectual promise, as well as personal need. The scholarship will ordinarily be payable in six equal installments, beginning October 1st. Applications should be filed with the Academic Secretary of the University.

The Alumni Jordan Scholarships

The Alumni Jordan Scholarship Fund has been founded largely by physicians who were at one time students of Stanford University. Its purpose is to pay the tuition fees of two or three medical students of high standing, with the understanding that at some future time the amount will be returned without interest. The student who once receives this scholarship loan will be entitled to its use throughout his medical course provided his work continues to be satisfactory.

The Bernard Scholarship in Entomology

Mrs. Matilda Bernard, widow of the late Henry M. Bernard of the University of Cambridge, England, has established an annual scholarship in Entomology. The purpose is to defray part of the expenses of

a student, who, under the direction of the Department of Entomology, shall carry on an investigation in insect histology having some reference to the biological theories of the late husband of the donor of the scholarship.

Thomas Welton Stanford Fellowship in Psychic Research

From the "Psychic Fund," created by Mr. Thomas Welton Stanford, of Australia, the Trustees have established the Thomas Welton Stanford Fellowship for Research in Psychic Phenomena.

Harvard Club Scholarship

The Harvard Club of San Francisco maintains a scholarship for the purpose of aiding graduates of the University of California and of the Leland Stanford Junior University to pursue graduate work at Harvard University. Appointments to this scholarship, the present income of which is $500, are for one year only. Applicants should state, in writing, their college course and their purpose and plans for the future. Applications should be in the hands of the Registrar by March 1st.

Yale Alumni Association Fellowship

The Yale Alumni Association of California awards annually the sum of $300 (to which Yale University adds an amount equal to the charge for tuition) to a graduate of the University of California or of Stanford University, for the pursuit of graduate study at Yale. Applications should be addressed to the Secretary of the Yale Alumni Association, Mr. James A. Ballentine, Monadnock Building, San Francisco.

The Rhodes Scholarships

Under the will of the late Cecil Rhodes two scholarships are assigned to each State and Territory in the United States. Each scholarship has a yearly value of $1,500, and is tenable at any college in the University of Oxford for three successive academic years.

Candidates must be unmarried, must be citizens of the United States, and must be not younger than 19 nor older than 25 on October 1st of the year in which they are elected. All scholars shall have reached before going into residence, at least the end of their sophomore year at some recognized degree-granting university or college. In accordance with the wish of Mr. Rhodes, the trustees desire that "in the election of a student to a scholarship, regard shall be had to (1) his literary and scholastic attainments, (2) his fondness for and success in manly outdoor sports, such as cricket, football, and the like, (3) his qualities of manhood, truth, courage, devotion to duty, sympathy for and protection of the weak, kindliness, unselfishness, and fellowship, and (4) his ex-

hibition during school days of moral force of character, and of instincts to lead and to take an interest in his schoolmates."

Students' Guild

The Guild is a student organization which seeks to make provision for the care of all cases of serious illness among its members. This is now accomplished for non-contagious diseases, through an arrangement with the Peninsula Hospital at Palo Alto and, for medical students, with the Lane Hospital in San Francisco. For the care of contagious diseases, provision has been made by the maintenance of a Detention Hospital on the University Campus.

All students are required to become members of the Guild by paying the fee, which is two dollars each semester. A uniform hospital rate of one dollar per day is charged all members of the Guild, in addition to such special charges as may be incurred for extra service.

GENERAL REGULATIONS

Registration

ON THE appointed Registration Days, in August and January, each student must obtain a certificate of registration *in person,* at the Registrar's office.

Matriculated students may register after the appointed Registration Days and during registration week, upon payment of a special fee of two dollars; during the week following the fee for late registration will be four dollars; after that the fee will be increased one dollar for each week's delay. Registration of undergraduates and specials will not be permitted later than one month after the beginning of instruction.

Study Card

At the Registrar's office the student receives a card for selection of studies for the semester. This card, properly filled out, and approved by the major department, must be filed with the Registrar at the time of registration; but late study cards will be accepted upon payment of a special fee of two dollars. Students registering late are admitted to particular classes only by permission of the instructors concerned. All work for which University credit is desired must be duly registered.

Enrollment in Classes

A student desiring to enter any class must present his certificate of registration to the instructor for enrollment at the beginning of each semester. Whether the student is qualified for enrollment in a particular class is a question to be decided by the instructor in charge. In general, the prerequisites for taking any given course are noted under "Courses of Instruction."

Change of Studies

A student desiring to drop a subject once taken up, or to take up a new subject after the study card has been filed, must present to the Committee on Registration a petition for such change, approved by the major department and by the instructors whose subjects are to be taken or dropped. In general, petitions so approved, if they do not give the student too many unit-hours, or too few unit-hours, and if presented within three weeks after the beginning of the semester, are

granted without question. If presented at a later time in the semester they will be granted only for extraordinary reasons, and, where the taking up of new subjects is involved, only on payment of a special fee of two dollars for each course; if otherwise acceptable but presented after the close of the semester, they will be granted only on payment of a special fee of four dollars for each course. In the case of petitions to drop subjects during the last six weeks of the semester, action will be deferred until the close of the semester.

Change of Major Subject

Petitions to change the major subject will be granted when approved by the departments in charge of both the old and the new subjects, the student being held to all the requirements of the new major subject. (First-year students may change their major subject at the end of the first or second semester without petition.) In general, the major subject may be changed at the end of the first year, and in some cases later, without appreciable loss of time to the student.

Amount of Work

Fifteen hours per week of recitations or lectures or an equivalent in laboratory work, constitutes an average semester's work. In general, students may register for as few as *thirteen* or as many as *eighteen* unit-hours; but in the case of students doing outside work for self-support or otherwise, and where considerations of health are involved, special restrictions will be made upon recommendation of the medical adviser; and where conditions or failures have been incurred in the preceding semester, not more than *fifteen* units may be registered unless by special permission of the Committee on Registration granted in advance. Permission to register for less than *thirteen* units may also be granted for special reasons; but registration for less than *ten* units will not ordinarily be accepted. Not more than eighteen units may be credited toward graduation for any semester's work, unless, in exceptional cases, permission to register for additional units is granted in advance. Graduate students are not held to any special number of unit-hours, but registration will not ordinarily be permitted unless such students are prepared to devote at least half of their working time to University study. Petitions for irregular registration should be presented at the beginning of the semester.

Every unit for which credit is given is understood to represent approximately, for the average student, three hours of actual work per week, through one semester. Thus, in lecture or recitation work, for one unit of credit one hour per week may be allotted to the lecture or

recitation and two hours for preparation or subsequent reading and study on the part of the student; but if a less amount of time is allotted for preparation or subsequent reading or study, there shall be a proportionate decrease in the amount of credit. Where the time is wholly occupied with drawing, field, or laboratory work, or in the class-room work of conversation classes, three full hours per week through one semester are expected of the student for each unit of credit; but where such work is supplemented by systematic outside reading or experiment under the direction of the instructor, such a reduction may be made in the actual drawing, field, laboratory, or class-room time as seems just to the department concerned.

Conditions and Failures

A student conditioned in any subject may arrange with the instructor concerned for such supplementary examinations or study as will make good the deficiency; but such deficiency must be removed within one year after the condition is incurred, otherwise the condition will be considered a failure. Work reported as incomplete may be made up during the first or second semester's registration after the incomplete is incurred; but if not made up until the second semester, the incomplete work shall be duly entered on the student's study card and shall count as part of the permitted registration for that semester to the extent of the actual unit-hours required for making up such incomplete work as estimated by the instructors concerned. A student failing in any subject cannot receive credit for the portion in which the failure is incurred until the subject has been re-registered and taken over again in class. A condition or failure or withdrawal from class without permission of the Committee on Registration, limits the student to *fifteen* units the semester following.

Mid-semester reports on scholarship are obtained from all instructors, and students reported as doing unsatisfactory work are notified of their deficiencies. A student whose work is unsatisfactory may be placed on probation at any time. At the middle and at the end of the semester each department shall be notified of all serious deficiencies in scholarship affecting students whose major work is in that department.

A student who receives passing grades in less than half the work for which he is registered during his first semester, or in less than two-thirds during any subsequent semester, shall be deemed to have failed in his studies. After a first failure, unless unusually serious, a student may, with the approval of the major department, again register

in the University, but shall be placed on probation for one semester. A second failure shall result in withdrawal from the University. Work marked "incomplete" will be considered of passing grade only when reported as satisfactory in quality and not seriously deficient in quantity.

A student whose delinquency is unusually serious, or is the result of persistent neglect, may be required to withdraw from the University at any time.

The Committee on Scholarship is authorized, after consultation with the major department concerned, to require withdrawal from the University, without regard to the number of units passed, of any student whose record indicates consistently poor scholarship.

At the close of each semester each department shall send to the Committee on Scholarship, on blanks to be furnished by the Registrar, a list of such students as, in its opinion, may not profitably continue as major students in the department, together with information as to the reasons for such opinion, causes of unsuccess, qualifications for possible success in other lines of study, etc. The Committee on Scholarship may require the withdrawal of such students from the University, or may permit re-registration in some other major subject, with the consent of the department concerned.

Leave of absence will not generally be granted to a student on probation, nor to any student whose work during the current semester is unsatisfactory, unless applied for at least six weeks before the end of the semester.

A student on probation may not take part in any intercollegiate contest, nor represent the University in any way, whether individually or in connection with any athletic, literary, musical, dramatic, or other organization.

From Special to Regular Standing

Special students may be entered in regular standing and become candidates for graduation, on passing examinations in the required number of entrance subjects, provided such examinations are passed not later than two years after matriculation. In place of entrance examinations, university work to the amount of five units for each entrance deficiency may be offered in university subjects which are also included in the entrance group.

A special student who has completed one hundred and fifty units of university work, including all major requirements, and whose general university record is deemed proof of superior scholarship, may become a candidate for graduation on approval of the Committee on Admission and Advanced Standing. Petitions to this end will not be considered

by the Committee until after the student has completed one hundred and twenty units of university work.

University Credit for Extra Entrance Subjects

Credit toward graduation may be given for entrance subjects in excess of the number required for admission, provided such extra entrance subjects are also university subjects, and are successfully continued in the University within two years after matriculation, and provided the student's general University record is deemed proof of superior scholarship. In general, three units of advanced credit will be granted for each extra entrance unit representing elementary work in a given subject, and five units of advanced credit for each extra entrance unit representing advanced work. Application for such university credit must be made within two years after matriculation. After matriculation additional entrance units may be offered only for the purpose of making up entrance deficiencies.

University Credit for Special Courses

Matriculated students on leave of absence may take work in other universities, usually without any restrictions other than those imposed by the institution in question. But work undertaken in any Summer Session may be subject to special regulations, and must be approved by the major department and by the department in which the work is to be taken.

Work of a special character taken outside of regularly scheduled classes, *in absentia* or during summer vacations, may be credited under the following conditions: (1) The work must be acceptable as part of the major requirements for the A. B. degree in the department by which it is authorized, must be authorized by the department faculty concerned, as well as by the instructor under whom it is to be carried on, must be given adequate supervision and direction and subjected to the same tests as in the case of regularly scheduled courses, and must be duly registered with the approval of the Committee on Admission and Advanced Standing; if not registered in advance, a fee of two dollars will be charged for late registration; (2) such work may not be offered to cover deficiencies due to poor scholarship; (3) a fee to the University of two dollars per semester unit must be paid before credit is entered.

The last semester's work of every candidate for a degree must be taken in this University; but in special cases, students who have obtained at least ninety units in resident work and who have completed all major department requirements may be exempted from

this regulation and permitted to register for special courses under the provisions noted above.

Advanced Standing

Students from institutions of equivalent rank, who maintain a satisfactory record after admission, may expect to receive the same standing as at the former institution, except that no such student can be given more than three years' advanced credit (ninety unit-hours toward graduation), and that differences in standard of entrance preparation will be taken account of. Every candidate must present a full certified transcript of his college record, including entrance credit, and a letter of honorable dismissal.

Recommended graduates of approved State Normal Schools where the normal training has been preceded by a full four years' high school course, or where high school and normal school course together cover six years' work, may ordinarily be granted an advanced credit of thirty units: in cases of superior scholarship this may be increased to forty-five units.

Advanced standing for work done before matriculation will generally be given only when certified as having been completed in some institution of recognized collegiate rank, except as provided above for extra entrance units, or, in particular cases, to recommended graduates of approved State Normal Schools. But in special cases permission may be given by the Faculty to receive credit on examination for work equivalent to regular University courses. Application for such examinations, with satisfactory evidence of the work accomplished, must be presented to the Committee on Advanced Standing. Applications for advanced standing on the basis of work done before entering the University must be made within two years after matriculation.

Graduate Standing

Admission to technical graduate standing does not imply admission to candidacy for an advanced degree (for the conditions of such candidacy see p. 82). If graduates of other universities desire to become candidates for the baccalaureate degree, the question of units required for graduation may be waived, upon approval of the Committee on Admisson and Advanced Standing, and the degree conferred on the satisfactory completion of not less than thirty units of university work and the fulfillment of all major and minor requirements. Graduate students not candidates for any degree, may be permitted, upon the approval of the major department, to undertake such work as their previous training seems to warrant.

Leave of Absence

A student desiring to leave the University for a brief time should apply to the Committee on Registration. If leave of absence is desired on account of sickness, the petition must be indorsed by the medical adviser. A leave of absence is merely a justification of the absence and not a relief from the work that has been missed. A leave of absence is usually necessary only in case of interrupted work; a student in good standing absent one or more semesters may re-enter at the beginning of any semester without formal petition.

Honorable Dismissal

An honorable dismissal means that the student is permitted voluntarily to withdraw from the University and is commended to the favorable consideration of any institution he may wish to enter. An honorable dismissal may be granted upon written application to any student not under discipline for misconduct.

Conduct of Students

In the government of the University the largest liberty consistent with good work and good order is allowed. Students are expected to show both within and without the University such respect for order, morality, personal honor, and the rights of others as is demanded of good citizens. Failure to do this will be sufficient cause for removal from the University.

In 1908 the Board of Trustees of the University provided that in all future rentals or leases of houses as fraternity chapter houses it shall be expressly stipulated that no intoxicating liquors of whatever kind shall ever be sold or used on the premises. The Trustees also by formal resolution requested the Academic Council to prohibit the use of liquor in fraternity chapter houses, student club houses, and other student lodgings.

This action of the Board of Trustees is in harmony with the instructions given by the Academic Council to its Committee on Student Affairs, and defines the policy of the University. Prohibition of the use of liquor extends to all student lodgings whether on the campus or elsewhere. The University assumes that the act of registering as a student implies full acceptance of this policy.

Student Control

In 1911-12 the Faculty Committee on Student Affairs entered into an agreement with the University Conferences by which responsibility

for the government of the students and for maintaining University standards was assumed by the men and women of the University. The general regulations of the University, standards of conduct, responsibilities, duties, and particular enactments of the Conferences are given in the "Manual of Student Control" printed by the Conferences.

University Health Control

The University exercises an advisory control over student health affairs through the Committee on Public Health.

Every student upon entering the University is required to report for a brief examination. General health and evidence of effective vaccination are the important factors in the examination. Any condition which may place a limitation on the amount or kind of work planned by the student may be discussed with him or made the subject of a report to his major department or to the Committee on Registration.

Students intending to train for any of the athletic teams, or to register for gymnasium work, are required to pass a careful physical examination at the beginning of each semester.

A careful inspection of all boarding and rooming houses in the community is carried on under the supervision of the Public Health Committee, and only those are permitted to register who arrange to live in houses which have been approved.

VACCINATION

Within three weeks after the day of registration every student must file with the Committee on Public Health a certificate, signed by the vaccinator, who must be a duly licensed and practicing physician, giving exact dates of vaccination, and showing either successful vaccination within seven years, or unsuccessful vaccination twice within the past twelve months.

Non-compliance with these requirements will result in a fine of two dollars after three weeks, and an additional fine of four dollars after five weeks, and cancellation of registration after seven weeks from the day of registration.

All certificates should be filed in person at the office of the Committee on Public Health. They will be returned upon request. "Conscientious objections" will not be recognized as exempting anyone. Unavoidable delay, or failure to secure a satisfactory certificate, will not exempt anyone from the fine.

"Immunity reaction" will be considered equivalent to one successful try. Only "vaccinia" will be accepted as successful vaccination.

ROOM CARDS

Every student is required to present at the Registrar's Office, at the time of registration, a properly signed room card. These cards can only be obtained from the owner or manager of the house from whom the room is rented. They are supplied to the house owner or manager by the Public Health Committee if the room meets the University requirements. Students are cautioned to obtain their room card before making a binding agreement for the rental of room.

GRADUATION

CANDIDATES may present themselves for graduation in January, May, and September.

No degree will be conferred upon any person who has not spent at least one year in resident study at the University. No honorary degrees are given.

Bachelor of Arts

The degree of Bachelor of Arts (A. B.) is conferred upon candidates who have satisfactorily completed a total of one hundred and twenty units of University work and who have also satisfied the requirements in major and minor subjects.

Thirty units constitute a normal year's work (see p. 73), but the ordinary class divisions (freshman, sophomore, junior, senior) are not recognized by the University. The degree is conferred whenever the requirements are met, without regard to the time spent, except that at least thirty units (including, except in special cases, the last fifteen) must be completed in this University.

Each student selects as a Major Subject the work of some one Department. The Major Department has the authority to prescribe not more than forty units in the Major Subject (exclusive of elementary courses in the Major Department which may be offered for entrance). The Major Department shall also recommend such other courses as it may consider desirable, and shall exercise an advisory supervision over the student's entire curriculum from semester to semester. Major Department supervision of the student's study lists shall be administered in the spirit of the major subject system, which is to provide the inexperienced student with necessary advice and direction while developing his power of initiative, and to accord to the mature student larger and larger responsibility in planning his own curriculum. It shall be considered a general principle of University policy, to be departed from only in exceptional cases, that at least sixty of the one hundred and twenty units required for the degree be taken outside of the Major Department.

In applied science the Major Department may prescribe so much of the entire one hundred and twenty units as it shall deem essential to the technical or professional requirements of the major subject.

A course in English Composition (English A) is prescribed for first-year undergraduates who do not satisfy the matriculation test.

Within these limitations the work in all departments is elective, and the student may freely choose any course which his previous studies have prepared him to undertake.

The recommendation of the Major Department is necessary to graduation.

(A student in regular undergraduate standing who does not intend to become a candidate for the A. B. degree, may choose, with the approval of the major department, any courses in the University which his previous training has prepared him to undertake.)

Bachelor of Laws

The degree of Bachelor of Laws (LL. B.) is conferred upon candidates who have satisfactorily completed two years (sixty units) of non-professional study in the pre-legal curriculum and three years of professional study in the law school.

Candidacy for Advanced Degrees

Candidates for advanced degrees must be registered in the University and must file a statement of their candidacy with the Registrar. The approval of a programme of study by the Department Faculty concerned and by the Committee on Graduate Study constitutes formal admission to candidacy. Only under exceptional circumstances will a programme of work be approved which is received later than the beginning of the semester preceding the one in which the degree is to be taken. It is advisable that such programme be filed as early as possible in the student's course. No advanced degree will be conferred except upon the recommendation of the Committee on Graduate Study.

The Committee on Graduate Study interprets the requirement that statements of candidacy must be filed 'at the beginning of the semester,' as meaning 'within the first six weeks of the academic year.' And in no case will the degree of Master of Arts be conferred in less than two semesters after formal admission to candidacy. Statements once submitted must be kept on file and cannot be withdrawn even after substitutes have been filed and accepted. Candidates for the degrees of Juris Doctor and Doctor of Medicine are exempt from the requirement that a programme of study shall be filed a definite time in advance.

Master of Arts

The degree of Master of Arts (A. M.) is conferred on graduates of this University, and on others who have had an equivalent training

elsewhere, upon the satisfactory completion in residence, of one year of work beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, and the passing of such general or final examination as the major department may require. A longer period of residence will be required of candidates who are inadequately prepared or who devote less than the normal amount of time to their graduate course. Work may be done in connection with the regular courses of instruction or, as research, independently of them. The programme of study must form a consistent plan of work pursued with some definite aim whether it lies wholly in a single department or field of study, or in more than one. At least two-thirds of a year's work must be devoted to advanced or graduate work in the major study or in intimately allied subjects.

Special regulations are:

1. A report upon the character of the work done shall be made by each instructor under whom a candidate is registered.

2. A candidate for the degree of Master of Arts must display ability to do independent work.

3. The Master's thesis, bearing the approval of the instructor under whose supervision it was prepared, must be submitted to the Committee on Graduate Study by the date on which instruction closes for the semester in which the degree is taken; upon acceptance, it shall be suitably bound and placed in the University Library.

The Committee on Graduate Study requires that the original, not a carbon copy, of the Master's thesis, written on paper of standard size and weight, be submitted and filed. The title-page should conform to that adopted by the committee.

Engineer

In the Department of Applied Science the professional degree of Engineer is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion, in residence, of one year of professional study beyond the baccalaureate requirements of the department in which the degree is sought, and upon the presentation of an approved thesis, showing ability to do independent work. Upon the recommendation of the Department, and in order to permit the carrying on of advanced work with equipment or under conditions not available at the University, the requirement of residence may in part be waived.

The special regulations stated above for the degree of Master of Arts apply also to the degree of Engineer.

Juris Doctor

The degree of Juris Doctor (J. D.) is conferred on students who have previously received the academic degree of Bachelor of Arts, or an equivalent degree elsewhere, upon the completion of the three years' professional law course. The first year of the professional law course may be taken by candidates for the A. B. degree.

Doctor of Medicine

The degree of Doctor of Medicine (M. D.) is conferred upon students who complete the five years' course in Medicine (which includes the interne year), based upon the three years' pre-medical course as laid down by the University.

Doctor of Philosophy

The degree of Doctor of Philosophy (Ph. D.) is conferred on graduates of this University, and on others who have had an equivalent training elsewhere, upon the satisfactory completion of at least three years of graduate work, beyond the baccalaureate requirements of the department in which the degree is sought, under the following conditions:

1. At least the last year of study must be spent in residence at this University.

2. At least one year prior to the date when the degree is sought, the candidate must show a reading knowledge of French and German in his special literature. The faculty of the department in which the major work is taken determines whether this requirement has been met.

3. The programme of study must include one major subject and one or two minors. The minor subject or subjects shall represent approximately one-third of the programme of study; except that such minor subjects may be waived upon the recommendation of the major subject department, if approved by the Committee on Graduate Study, when the breadth and extent of the candidate's training justify such a course,—in which case the candidate will be expected to show such breadth of training in his oral examination.

4. The candidate must present a thesis at least six weeks before the close of the semester in which the degree is sought, in form and content acceptable to his department and to the Committee on Graduate Study. He must guarantee the printing of the thesis within one year after the degree is conferred and the deposit of one hundred copies in the Library.

5. In addition to satisfying the requirements of major and minor departments, the candidate must submit to an oral test or examination by a special examining committee of the Faculty and in the presence of such other members of the Faculty as care to attend. The special examining committee consists of (1) the professors of the major-subject department with the Chairman of the Committee on Graduate Study presiding, (2) the one or more professors in charge of the minor subject or subjects, (3) two members of the Committee on Graduate Study whose departments lie nearest that of the major professor, and (4) the Secretary of the Committee on Graduate Study, acting as its secretary. The Committee may at its discretion invite other members of the Faculty to participate in the oral examination.

Advanced Degrees in the Medical Department

The Divisions of the Medical Department are considered as equivalent to other departments of the University in respect to candidacy and requirements for the degrees of Master of Arts and Doctor of Philosophy, and all the foregoing regulations apply to these divisions and division faculties as to departments and department faculties, with the following modifications and limitations:

1. Candidates for these degrees must have received the degree of A. B. at Stanford, or an equivalent degree elsewhere, and must have completed all requirements for admission to the Department of Medicine, and such other requirements as each division faculty may prescribe.

2. Time spent in candidacy for the degree of Master of Arts or Doctor of Philosophy will not be counted toward the degree of Doctor of Medicine.

3. Candidates for these degrees in the divisions of Medicine, Surgery, and Obstetrics and Gynecology, must have received the degree of Doctor of Medicine.

The High School Teacher's Certificate

High school certificates may be issued by County, and City and County Boards of Education under the provisions of Section 1519, subdivision 5 (*a*), Section 1775, subdivision 1 (*a*), and Section 1792 of the Political Code of California, to recommended candidates who meet all the requirements under any one of the groups outlined below.

In addition to the technical requirements prescribed by the State Board of Education the University requires, preliminary to recommendation, the completion of enough work (and of sufficiently high

grade), in at least one subject, to secure a department recommendation that the candidate is fitted to teach the subject in high school classes.

GROUP I: STANDARD GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One year (26 units) of graduate study (which shall include one full-year course of advanced or graduate work (4 units) in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Fifteen units in Education, including courses in (*a*) School and Classroom Management (1 unit); (*b*) Secondary Education (2 units); (*c*) Practice Teaching (or eight months' teaching experience) (4 units); (*d*) a Teachers' Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by or listed under the work in Education (3 units, maximum for all such courses).

GROUP II: NORMAL-GRADUATE GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One half-year (13 units) of graduate study (which shall include 2 units of advanced or graduate work in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Graduation from an approved normal school.

4. Five units in Education, including (*a*) Secondary Education, (2 units); (*b*) a Teachers' Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by or listed under the work in Education (3 units, maximum for all such courses).

GROUP III: EXPERIENCED-TEACHERS' GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One half-year (13 units) of graduate study (which shall include 2 units of advanced or graduate work in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Twenty months' experience in schools of elementary or secondary grade.

GROUP IV: SPECIAL NORMAL-COURSE GROUP

1. A Bachelor's degree from an institution requiring eight years of high school and college work.

2. One half-year (13 units) of graduate study (which shall include 2 units of advanced or graduate work in at least one subject in which recommendation is sought) in an institution approved by the State Board of Education.

3. Five units in Education, including (*a*) Secondary Education (2 units); (*b*) a Teachers' Course in at least one subject in which the candidate expects to be recommended for certification, if such course be given in the institution and be accepted by or listed under the work in Education (3 units, maximum for all such courses).

4. One half-year (following the graduate study) in an approved normal school in which special courses are given for college students who are preparing for high school certification.

Preliminary Secondary School Certificate

A Preliminary Secondary School Certificate, authorizing the holder to do cadet teaching, without salary, in any secondary school of the county, may be granted to graduate students of any university accredited by the State Board of Education, who present a recommendation from the university that such certificates be granted.

Special Certificate

A Special Certificate, authorizing the holder to teach only such branch or branches and in such grades as are named in such certificate (manual and fine arts, technical arts, household arts, commercial subjects, physical culture, music) may be granted as follows:

To recommended candidates who have had at least three years' instruction (for the elementary certificate; four years for the secondary certificate) beyond that required for graduation from a high school maintaining a four-year course in advance of the eighth grade (or who have had an equivalent amount of training); provided that at least one half of this three years' instruction (for the elementary certificate; four years for the secondary certificate) must have been devoted to study or work in the special subject or subjects in which application for certification is made and in such subjects as are strictly supplementary thereto, as arranged and approved by the recommending authorities of the institution in which the work was taken (or an equivalent amount of special training); *provided* also that two-fifths of a year of the time

required to be given to the special subject or subjects must have been devoted to the study of the pedagogical subjects suited to the training of an elementary [or secondary] school teacher; at least one half of which time must have been devoted to practice teaching, including methods of instruction in the special subject or subjects, under competent supervision.

Time devoted in the secondary school period to study or work in the special subject or subjects in which the candidate desires certification may be substituted at the rate of half-time for similar studies or work in the collegiate period. Such substitution shall not exceed one-half of the total time required in the special subject or subjects. One year's successful experience in teaching may be substituted for half of the required pedagogical work, and two years' teaching experience may be substituted for the entire pedagogical requirement.

Preliminary Special Certificate

A Preliminary Special Certificate, authorizing the holder to do cadet teaching, without salary, in the special branch named in the certificate, in any elementary or secondary school in the county, may be granted to students enrolled in any vocational teachers' training course established under the laws of California who present a recommendation from the principal of the school maintaining such course that such certificate be granted.

Permits to Teach in Intermediate School Courses

Holders of elementary school certificates who have completed two years of work in a college, or one year of work in a college in addition to a normal school course, may teach in the third year of any intermediate school course, provided they comply with the following regulations established by the State Board of Education in accordance with subdivision 3b of Section 1771 of the Political Code:

Candidates who are not Graduates of Normal Schools shall present to the County Board of Education a valid certificate of elementary grade issued by a County, or City and County Board of Education in California, and a written statement attested by a college or university listed as such in the latest report of the United States Bureau of Education, that the candidate has completed at least sixty semester hours in regular college courses in such institution, including at least ten hours of pedagogy, and at least thirty hours in any three of the following departments: English, French, German, Spanish, Latin, History, Mathematics, Physical Science, Biological Science.

Candidates who are Graduates of Normal Schools shall present a

diploma of graduation from a California State Normal School or a normal school accredited by the State Board of Education for the elementary certificate, and a written statement attested by a college or university listed as such in the latest report of the United States Bureau of Education, that the candidate has completed at least thirty semester hours, of which twenty hours shall be in regular college courses in such institution, in any two of the following departments: French, English, German, Spanish, Latin, History, Mathematics, Physical Science, Biological Science.

Appointment Registry

The University endeavors (1) to keep a record of students and graduates who wish to teach, or to be transferred to other teaching positions, and (2) upon application of school and college officials, to recommend for suitable vacancies such candidates as seem most likely to succeed.

The University aims to obtain complete information with regard to the scholarship, experience, and personal qualifications of each candidate, and reports from instructors and others concerning the fitness of candidates are filed in the office of the Appointment Secretary. Such information is regarded as confidential, and general letters of recommendation are not given. Copies of such credentials as are on file will be mailed to school and college officials, at their request, or at the request of the candidate concerned. But the University reserves the right of refusing to extend its co-operation to students when they apply for positions for which they are manifestly unfit. Official recommendations for positions are made only upon request of those in authority. Letters requesting such recommendations should state explicitly the subjects to be taught, the salary to be paid per year, and the time when the engagement is to begin.

While the services of the Office have been called for mainly in connection with school and college positions, there is an increasing number of requests for persons in other types of employment—stenographers, secretaries, librarians, social and play-ground workers, and the like.

Blanks for registration may be obtained of the Appointment Secretary, at the Registrar's office, and should be filled out each year, preferably during February or March.

Communications should be addressed to the Appointment Secretary, Stanford University, California.

COURSES OF INSTRUCTION

[The superior figure [1] before the name of an instructor or assistant indicates first semester only; [2] second semester only.]

GREEK

Augustus Taber Murray, Professor.
Ernest Whitney Martin, Associate Professor.
Emily Virginia Poindexter, Flora Marie Rausch, Assistants.

[With the co-operation of Professor Fairclough of the Department of Latin.]

Undergraduate Courses

Instruction in the lower classes is given chiefly by means of recitations, but as the student advances these are supplemented by lectures. In courses 1, 2, 3, 13, and 14 the work is arranged so as to provide as far as possible individual instruction for each student. In this way it has been found possible to read more widely, while at the same time there is a distinct gain in thoroughness.

The Teacher's Recommendation.—Courses 2, 3, 4, and 15 (or equivalents) constitute the minimum requirement for the high school teacher's recommendation in Greek.

1. Elementary.—Grammar; translation of easy prose; Greek composition. After the essential grammatical forms have been mastered, the students are led to read as widely as possible in simple narrative prose, including Xenophon's Anabasis, selections from the Gospels, and Cebes' Tablet. The course includes systematic drill in the ordinary forms of syntax, and exercises in writing Greek are regularly introduced. Two divisions.

3 to 5 units, both semesters (Martin, Murray) MTWThF 9:15, 1:30

2. Simple Attic Prose.—Selections from prose writers, adapted to the needs of individual students. Open to those who have offered Greek for entrance, or who have completed course 1 in the University. Students who have completed course 14 may take this course on recommendation of the instructor. In this course each student meets regularly with one of the instructors for direct personal instruction.

3 units, 1st semester (Murray) MWF 8:15

2a. The Iliad.—A course parallel to course 2, and like it open to students who have completed course 1. The student is introduced to the study of Homer, and as much as possible of the Iliad is read.

3 units, 1st semester (MURRAY) MWF 10:15

3. The Odyssey.—A continuation of course *2a*, similarly conducted.

3 units, 2d semester (MURRAY) MWF 10:15

4. Prose Composition.—Systematic training in the writing of simple Greek with exercises in sight translation. Required of Greek major students in connection with courses 2 and 3.

2 units, both semesters (MARTIN) TTh 9:15

4b. Prose Composition.—A combination of course 4 for more advanced students.

2 units, both semesters (MURRAY) TTh 8:15

7. Modern Greek.—Grammar, exercises, simple reading in current newspapers, etc. Wider reading in modern Greek literature and translations.

2 units, 2d semester (MARTIN) TTh 10:15

11. Greek Tragedy.—The Prometheus Bound and Agamemnon of Aeschylus, with the Antigone of Sophocles and the Iphigeneia Taurica of Euripides, read and interpreted, with lectures on Greek dramatic art from time to time.

3 units, both semesters (MURRAY) MWF 11:15

12. Greek Testament.—A study of the book of Acts, with passages from the letters of Paul.

2 units, 2d semester (MURRAY) TTh 11:15

13. Rapid Reading.—The student and instructor meet weekly for individual reading in easy Greek, suited to the student's particular needs. Open to all who have had at least one semester of Elementary Greek.

1 to 3 units, both semesters (MURRAY, MARTIN, RAUSCH, GRAHAM) By arrangement

14. Introductory.—An introduction to the study of the Greek language leading up to the reading of easy Attic prose and New Testament Greek. Special attention is given to the Greek element in English.

3 to 5 units, 2d semester (MARTIN) MTWThF 2:30

14b. Introductory.—A rapid introduction to the Greek language, followed as soon as possible by the reading of the Gospel of John. Open to all students, and intended primarily for those who mean to take but a few courses in Greek.

3 units, 2d semester (MURRAY) MWF 11:15

15. Teachers' Course.—Lectures on methods and texts, with practice teaching.

2 units, 2d semester, (Murray) By arrangement

16. Theocritus.—A study of the Idylls, with lectures on Alexandrian poetry.

2 units, 2d semester (Fairclough)

Graduate Courses

The center of the Graduate work is the Greek Seminary—made up of the director and such students as satisfy him of their fitness for the work. The Seminary meets weekly for the critical interpretation of some Greek author, the different members, in turn, filling the post of interpreter. Topics for investigation are assigned, and papers prepared by the members are read and discussed.

Members of the Seminary are expected to supplement their critical work by wide reading, and lectures on the author or authors under discussion are given by the director. It is in the highest degree desirable that all members of the Seminary should be able to read both French and German, and this is indispensable in the case of those who are candidates for the degree of Doctor of Philosophy.

17. The Greek Seminary.—In 1915-16 the Seminary was occupied with the Odyssey. Large portions of the poem were read and interpreted, and lectures were given on the history of the text.

2 to 4 units, both semesters (Murray) W 2:30

18. Homeric Criticism.—Graduate and advanced students meet weekly with the director of the seminary for readings and discussions of recent Homeric criticism with especial reference to the Odyssey.

2 to 4 units, both semesters (Murray) M 2:30

Special Courses

In addition to the above courses the following are given, intended primarily for general students. They do not presuppose a knowledge of Greek, and they do not count as part of the major work for students in Greek. The courses are open to incoming freshmen only with the consent of the lecturer.

19. The Greek Epic.

2 units, 1st semester (Murray) TTh 10:15

20. Greek Tragedy.

2 units, 2d semester (Murray) TTh 10:15

21. Greek Sculpture.—Lectures, illustrated with photographs and lantern slides, on the history and character of Greek sculpture.

2 units, 1st semester (Fairclough) TTh 11:15

22. Greek Literature.—Representative types, tracing the development of Greek literature, studied in English translations. Informal lectures from time to time.

3 units, 2d semester (Martin) MWF 11:15

23. New Testament Literature.—A critical introduction to the literature of the New Testament. Lectures, with assigned readings.

2 units, 1st semester (Murray) TTh 11:15

24. History of Greece, A.—A general outline course to the end of the Peloponnesian war. Lectures, with readings from the sources in translation. Open to all students.

3 units, 1st semester (Martin) MWF 8:15

25. History of Greece, B.—A general survey from the decline of Athens to modern times. Lectures, with collateral reading. Open to those who have had course 24.

2 units, 2d semester (Martin) TTh 11:15

26. Seminary.—A study of the classical tradition in the early American poets, 1625-1807.

2 units, both semesters (Martin) Th 2:30-4:30

LATIN

Henry Rushton Fairclough, Professor.
Jefferson Elmore, Benjamin Oliver Foster, Associate Professors.
William Chislett, Jr., Anna Shipley Cox, Graduate Assistants.

[With the co-operation of Associate Professor Martin of the Greek Department, and of Professor Hempl of the Department of Germanic Languages.]

Undergraduate Courses

The aim of the undergraduate courses in Latin is to give the student a somewhat systematic knowledge of the language and its development, an acquaintance with the representative authors of Latin literature, and some insight into the life, culture, and civilization of ancient Rome.

The Department recognizes two classes of major students: (1) those who wish to pursue a course of liberal studies, including Latin as a prominent feature; (2) those who, expecting to teach Latin, desire to be properly equipped for that purpose.

Students who wish to qualify for teaching Latin must take courses 2, 4, 5, 6, 7, 8, 9, and 17, together with such other courses as are recommended by the Department. To other students more freedom of choice is allowed.

1a. Introductory.—The course is given for students who desire at least one year of Latin and for those who wish to begin the subject with a view to further study.

3 units, both semesters (Elmore) MWF 1:30

1b. Intermediate.—This course is designed for those who have completed 1*a* and who desire to continue the subject by the Direct Method. The texts for reading include selections from Eutropius, Nepos, Caesar, Cicero, and Virgil.

3 units, both semesters (Elmore) [Not given in 1915-16.]

1. Virgil and Cicero.—Virgil, selected books of the Æneid; Cicero, selected orations. This course is planned for those who have passed in 1*a* or entrance subject 8*a*.

3 units, both semesters (Cox) MWF 11:15

2. Terence, Cicero, and Horace.—Terence, Andria; Cicero, De Senectute; Horace, Odes and Epodes; selections from Catullus. In addition to the study of these Latin texts, the course includes instruction on the general character and development of Roman literature. Open in either semester to students who have completed course 1, or who have offered entrance subject 8*b*. Two sections.

3 units, both semesters (Foster) MWF 8:15, 9:15

3. Legal Latin.—The Institutes of Gaius or Justinian are read both as a training in language and as an introduction to some conceptions of Roman law. The course is useful to all who desire a first-hand knowledge of Roman law and of the origins of European social institutions. Open to any students who have had two years of Latin.

2 units, both semesters (Fairclough) TTh 10:15

4. Prose Composition I.—Practical exercises and rapid reading of easy prose. Open in either semester to first-year students.

2 units, both semesters (Elmore) TTh 11:15

5. Horace.—Satires and Epistles. Open to those who have completed course 2 or 3, or an equivalent. Attention is directed especially to the style and subject matter, to Horace's influence on later literature, and to the salient features of the Augustan age.

3 units, 1st semester (Elmore) MWF 10:15

6. Livy and Tacitus.—Selections from Livy's History; the Agri-

cola of Tacitus. This course, complementary to course 5, involves a survey of Roman history and the literature of the early empire.

3 units, 2d semester (ELMORE) MWF 10:15

7. Oral Latin.—Practice in speaking and in the direct method of teaching.

2 hours, 1 unit, 1st semester (FOSTER) TTh 9:15

8. Roman Comedy.—The Trinummus and the Captivi of Plautus, and either the Menaechmi or Terence's Hauton Timorumenos. Attention is paid to early forms, constructions, and meters, and to the staging of a Roman play, with some consideration of the later history of comedy.

2 units, 1st semester (FAIRCLOUGH) TTh 8:15

9. The Letters of Cicero.—Selections from the correspondence are read with a view to obtaining a conception of Cicero's character as a man and to becoming acquainted, as far as possible, with the social and political conditions of the time.

2 units, 2d semester (FOSTER) TTh 8:15

10. Pliny.—Selections from the works of the younger Pliny.

2 units, 1st semester [Not given in 1915-16.]

11. Roman Elegy.—The course is devoted chiefly to Tibullus and Propertius.

2 units, 2d semester (FOSTER) [Not given in 1915-16.]

12. Lucretius.—Selections from the De Rerum Natura are read with particular attention to the philosophic thought and its poetic treatment.

3 units, 1st semester (FOSTER) MWF 11:15

13. Prose Composition II.—An advanced course, suitable for those who expect to teach Latin.

1 unit, 2d semester (FAIRCLOUGH) M 9:15

14. Juvenal and Martial.—Selections from the Satires of Juvenal and the Epigrams of Martial, with supplementary reading in other writers of the first century.

2 units, 1st semester (FAIRCLOUGH) WF 9:15

16. Quintilian.—Book X. Rhetoric and literary criticism among the Romans, with a survey of Greek and Roman literature.

2 units, 2d semester (FAIRCLOUGH) WF 9:15

17. Teachers' Course.—Lectures on methods of teaching Latin, with practical exercises. Open only to advanced students.

2 units, 1st semester (ELMORE) M 2:30-4:30

19. Roman History from the Sources.—Readings in the first decade of Livy.

3 units, 2d semester (Foster) MWF 11:15

Graduate Courses

These courses are open to graduates in Latin, and are most profitable to those who have had some undergraduate work in Greek. The ability to read French and German is also very desirable, and, in the case of candidates for the degree of Ph.D., necessary. The aim of the course is to give the student a thorough grasp and detailed knowledge of particular authors, and of certain periods and fields of literary activity, as well as a training in literary criticism, and an acquaintance with the methods of original research.

22. Latin Seminary.—In 1915-16 the Seminary is devoted to Epic poetry. The Aeneid of Virgil is studied in its entirety as a work of art, and selected passages will be interpreted. Attention will be paid to classical influence on mediaeval and modern literature. The course will be of special importance to teachers of Latin. Students should provide themselves in advance with a complete text of Virgil, such as that in the Oxford or Teubner series.

2 to 6 units, both semesters (Fairclough) F 2:30

23. Rapid Reading.—A weekly session for the reading of epic poetry, in connection with the seminary.

2 units, both semesters (Foster) T 2:30

25. Introduction to Latin Palaeography.—Lectures and practice in reading facsimiles of manuscripts.

1 unit, 1st semester (Foster) T 3:30

26. Introduction to Latin Epigraphy.—Lectures and readings in Latin inscriptions.

1 unit, 2d semester (Martin) Th 10:30

28. Venetic.—Lectures on the nature of the language and its relation to other Italic dialects.

2 units, 2d semester (Hempl)

Special Courses

29. History of Rome.—A general course, open to all students.

3 units, 2d semester (Elmore) MWF 8:15

30. Studies in Roman History.—This advanced course takes up the consideration of special problems. Open by permission of the instruct-

or to those who have had Latin 29 or an equivalent. For 1915-16 the subject will be the sources of Roman Municipal Government.

2 units, 1st semester (ELMORE) TTh 10:15

31. Roman Art and Archaeology.—A survey of the topography, architecture, sculpture, and other art-forms of ancient Rome, illustrated with lantern-slides. This course is open to all, but first-year students must receive special permission from the instructor before registering.

2 units, 2d semester (FAIRCLOUGH) TTh 11:15

32. Latin Literature.—Lectures on the principal poets and prose writers, with assigned readings in English translations. Open to all students.

2 units, 1st semester (FOSTER) [Not given in 1915-16.]

33. Classical Influence in English Literature.—Lectures with assigned readings.

2 units, both semesters (CHISLETT) TTh 11:15

34. Journal Club.—Advanced students will meet twice a month for a consideration of articles appearing in current periodicals.

1 unit, both semesters (FAIRCLOUGH)

GERMANIC LANGUAGES

GEORGE HEMPL, JAMES OWEN GRIFFIN, Professors.
KARL GUSTAV RENDTORFF, WILLIAM ALPHA COOPER, Associate Professors.
BRUNO BOEZINGER, Assistant Professor.
CHARLOTTE A. KNOCH, CHARLES REINING, Instructors.
WILHELM AUGUST JULIUS VON LÜBTOW, Assistant.

The advanced courses are intended both for the maturer undergraduate and for candidates for the degrees of Master of Arts and Doctor of Philosophy. Special consideration is given to the needs of those who intend to make the teaching of German their profession. The Library facilities are good, and the collection is being rapidly strengthened in all directions. The private library of the late Professor Hildebrand furnishes valuable material, particularly in the older literature and in lexicography. In modern literature the Library offers good opportunities for advanced work, the Goethe collection being especially satisfactory. The files and the current numbers of most of the important journals are at hand.

Students who intend to teach German are expected to take at least

courses 3, 7, 8, 12, 13*b*, 14, 17, 22, and either 10 or 11. It is important that the student heed in time what is said in the note above course 10.

1. Elementary.—It is the object of this course to put the learner in possession of the elements of the German language. This implies: (1) a personal command of simple German, that is, the ability to understand such German whether heard or read, and to employ the language in simple conversation, narration, and description, both orally and in writing; (2) such a ready familiarity with the elements of German grammar as is essential for the attainment of this command of the language.

5 units, both semesters (KNOCH, REINING, VON LÜBTOW) MTWThF 8:15, 9:15, 10:15, 11:15

[*Note.*—This course is the equivalent of two years of German in high school, and is open to all students who have not presented two or more units in German for entrance into the University. Students who present only one unit for entrance should take the second semester of this course.]

2. Second-year German.—(See note below.)

a. Reading.—Texts suitable for the second year; for the most part, the writings of contemporary authors.

3 units, both semesters (GRIFFIN, KNOCH, REINING, VON LÜBTOW) MWF 8:15, 9:15, 10:15, 11:15

b. Second-year Composition, oral and written.—The work of this course is intended to assist the pupil in getting a personal command of German, both spoken and written; with it is correlated a thorough review of the elements of the grammar. By composition is meant, not translation from English, but practice in putting one's thoughts into acceptable written German.

2 units, both semesters (BOEZINGER, REINING) TTh 8:15, 9:15

c. Scientific Reading.—Texts selected with a view to preparing scientific students to read technical literature. It is recommended that this course be not taken before the sophomore year.

3 units, both semesters (BOEZINGER) MWF 10:15, 11:15

[*Note.*—Courses 2*a* and 2*b* together are the equivalent of the third and fourth years of German in high school. Prerequisite: German 1, or two entrance units in German. Students who present three units in German for entrance should take the second semester of courses 2*a* and 2*b*. In exceptional cases, however, they may be permitted to register conditionally in courses 3 and 7 for the first semester.]

3. Classical German Drama.—This course aims chiefly to be an introduction to the spirit of the classical German drama; but throughout the course an effort is also made to familiarize the student, by

means of various selected readings, with the life and character of the German people.

3 units, both semesters (GRIFFIN) MWF 8:15

4. Modern German Drama.—Lectures in connection with the interpretation and rapid reading of some of the more important works of the modern dramatists.

2 or 3 units, both semesters (GRIFFIN) TTh 8:15

5. Modern German Novels.—Rapid reading, without translation. Class discussions in German.

3 units, both semesters. (COOPER) MWF 9:15

6. Conversation.

1 unit, both semesters (KNOCH) By arrangement

7. Third-year Composition.

2 units, both semesters (BOEZINGER) TTh 9:15

8. Advanced Composition.

2 units, both semesters (BOEZINGER) TTh 11:15

9. Composition.—This course is designed to follow course 8, and may be taken more than once for credit.

1 unit, both semesters (BOEZINGER) By arrangement

[*Note.*—Students wishing to take up either of the two following courses (10, 11) will be expected to have such preparation as can be obtained by pursuing courses 3 and either 4 or 5.]

10. Schiller.—Schiller's life and works. [See note above.]

2 or 3 units, both semesters (RENDTORFF) MW 8:15

11. Goethe.—Course conducted in German. [See note above 10.]

a. Goethe's life and works.

3 units, both semesters (COOPER) [Not given in 1915-16]

b. Goethe's Faust: Urfaust, Fragment of 1790, Part First and Part Second.

3 units, both semesters (COOPER) MWF 10:15

c. Goethe's Tasso.—Study of sources.

1st semester (COOPER) By arrangement

12. Advanced German Grammar.—A systematic presentation of the important facts of German grammar, together with individual investigations of the usage of various writers.

a. Orthography, Phonology, and Morphology.

2 units, both semesters (HEMPL) TTh 1:30

b. Syntax.

2 units, 1st semester (COOPER) TTh 10:15

13. The History of German Literature.—Lectures and readings.

a. From the earliest times to the eighteenth century.

2 units, both semesters (RENDTORFF) [Not given in 1915-16]

b. The eighteenth and nineteenth centuries.

2 units, both semesters (RENDTORFF) TTh 8:15

c. The Works of Gerhard Hauptmann.

(RENDTORFF) By arrangement

14. Teachers' Course.—Lectures on the various methods employed in teaching modern languages, together with practice in the conducting of classes. It is recommended that this course be taken the year before "Practice Teaching."

3 units, 2d semester (HEMPL, COOPER) M 1:30; F 1:30-3:30

15. The Genesis of Grammar.—Lectures on the origin and development of the parts of speech and of other grammatical apparatus.

2 units, 2d semester (HEMPL) [Not given in 1915-16.]

16. The Genesis of Writing.—Lectures on the origin and development of writing, with special reference to European systems.

2 units, 1st semester (HEMPL) WF 1:30

17. Middle-High German.

a. Grammar and selected texts (first semester); *Nibelungenlied* (second semester).

2 units, both semesters (RENDTORFF) TTh 9:15

b. Advanced Middle-High German.

2 units, both semesters (RENDTORFF) By arrangement

18. Old-High German.

2 units, both semesters (BOEZINGER) By arrangement

19. Old Norse.

2 units, 2d semester (HEMPL) [Not given in 1915-16.]

20. Gothic.

2 units, both semesters (BOEZINGER) By arrangement

21. The Runes.—Lectures on the origin and development of primitive Germanic writing.

2 units, 1st semester (HEMPL) [Not given in 1915-16.]

22. The History of German Civilization.—This course is intended for students of German who wish to become acquainted with the development of German civilization in its relation to German literature. Lectures with stereopticon.

2 units, both semesters (RENDTORFF) W 2:30-4:30

23. Thesis Course.—Special investigations and reports intended primarily to furnish undergraduates a training in preparation for original research work. Under the direction of the various members of the staff. Credit subject to individual adjustment.

26. Practice in Teaching.—A limited number of major students who have taken the German Teachers' Course may arrange for practice in teaching in connection with the work in German 1 and German 2. The course should be registered for as "Education 26."

4 units, either semester (Cooper, Knoch) By arrangement

[See also course 28 in the Department of Latin.]

ROMANIC LANGUAGES

Oliver Martin Johnston, Professor.

Clifford Gilmore Allen, Associate Professor.

Aurelio Macedonio Espinosa, † Robert Edouard Pellissier, Stanley Astredo Smith, Assistant Professors.

Louis Peter de Vries, Instructor.

Edmund Vernon Gage, [1]Carl Marcus Melom, Eugene Jean Oberlé, Marcelle Rouiller, John Sellards, [2]Jere Turpin, Teaching Assistants.

The undergraduate courses in the Romanic Languages are planned so as to give students an intimate acquaintance with the modern forms of the languages spoken in the principal neo-latin countries. To this end systematic attention is paid to pronunciation, reading, syntax, and conversation. In the higher courses special emphasis is laid on the study of literature. In order to give students an opportunity to become familiar with the spoken idioms, several of the advanced courses are conducted as far as possible in the language which forms the object of study.

The Department recognizes two classes of major students: (1) students who expect to teach French or Spanish and who wish to take up the study from the point of view of the specialist; (2) students who desire to group a course of study of a general nature around that of French or Spanish.

Either French or Spanish may be selected as a major subject. Majors in either of these subjects will be required to complete forty units in the Department exclusive of the elementary course in the major subject.

†Absent on leave, 1915-16.

In addition major students who intend to teach either French or Spanish will be expected to take Latin 1, 2 and 4, German 1 and 2, and Elementary French or Spanish or Italian.

The Teacher's Recommendation.—The minimum requirement for the High School recommendation is as follows: In French—courses 2, 3, 6, 17, and six units selected from courses 7, 8, 9, 18, 19, 21; in Spanish—courses 10, 11, 12, 13, 14, 22, and 23 or 24. The Department will insist also on course 26. Recommendations will be given only on the vote of the Department, and will demand a degree of scholarship above the ordinary passing mark.

Courses for Undergraduates

1a. Elementary French.—Fraser and Squair, French Grammar, with written and oral exercises and systematic training in French pronunciation on the basis of Matzke's Primer of French Pronunciation; Aldrich and Foster's French Reader.

3 units, both semesters (De Vries, Smith) MWF 9:15, 11:15

1b. Elementary French, Reading Course.—The course is intended for students who merely desire to obtain a reading knowledge of the language. Aldrich and Foster, Foundations of French; Aldrich and Foster's French Reader; Mérimée, Colomba.

3 units, both semesters (Sellards) MWF 10:15

[Courses 1*a* and 1*b* are continuous courses, open to all, but students desiring to enter after the end of the second week will be admitted only upon special examination.]

2. French Composition and Conversation.—The course will be conducted as far as practicable like the corresponding course in English composition, a part of each hour being devoted to conversation. Open to students who have completed course 1*a*, or who have received credit for entrance subject 6*a*.

3 units, both semesters (Grojean, De Vries) MWF 8:15, 10:15

3. Modern French Reading.—Reading of selected texts in prose and verse. In addition, some 300 pages of easy prose will be assigned each semester for outside reading. Open to students who have completed course 1*a* or course 1*b*, or who have received credit for entrance subject 6*a*.

2 units, both semesters (De Vries, Gage) TTh 9:15, 10:15

4. French Pronunciation.—Practice in French pronunciation with the phonograph, open to students registering for course 2. One class exercise and two practice hours each week for one semester.

1 unit, either semester (De Vries) T 1:30

[Courses 2, 3, and 4 constitute the second year's work in French, and should, if possible, be taken during the same year. Course 4 may not precede course 2.]

5. Reading and Writing of French.—Vreeland and Koren, French Syntax and Composition. An intermediate course in reading and composition intended primarily for students entering with entrance subjects 6*b* or 6*c*.

3 units, both semesters (GROJEAN) MWF 9:15

6. Advanced French Prose Composition.—Translation into French of selected English prose. Open to students who have completed course 2 or course 5.

2 units, both semesters (GROJEAN) TTh 8:15

7. Classical French.—Reading and discussion of representative texts of the principal authors of the classical period, collateral reading and reports. Prerequisite: course 3 or its equivalent.

3 units, both semesters (SMITH) MWF 10:15

8. Lectures on Modern France.—The lectures will be in French. There will be outside reading and reports. Prerequisites: courses 2 and 3, or course 5, or their equivalent.

2 units, 1st semester (GROJEAN) TTh 10:15

9. Introduction to the History of French Civilization.—Lectures in French. Outside reading and reports. Prerequisites as above.

2 units, 2d semester (GROJEAN) TTh 10:15

10. Elementary Spanish.—The elements of grammar, composition, and conversation; reading, translation, and conversation based on Spanish texts. A continuous course open to all.

3 units, both semesters (ALLEN, ESPINOSA, OBERLÉ, MELOM, ROUILLER, TURPIN) MWF 8:15, 9:15, 10:15, 11:15

11. Second-year Spanish Composition and Conversation.—Review of grammar, with composition and conversation. Conducted entirely in Spanish. Open to students who have completed course 10, or its equivalent.

3 units, both semesters (ESPINOSA) MWF 10:15

12. Modern Spanish Reading.—Reading of selected texts in prose and verse. Open to students who have completed course 10 or who have received credit for entrance subject 5*a*.

2 units, both semesters (ALLEN, GAGE, MELOM) TTh 9:15, 11:15

13. Advanced Spanish Composition and Conversation.—(*a*) Reading of Spanish texts with exercises in composition and abundant oral

drill. (*b*) Translation into Spanish of selected English prose. Open to students who have completed course 11 or its equivalent.

2 units, both semesters (Espinosa) TTh 9:15

14. Classical Spanish.—A study of the principal authors of the classical period. Representative texts will be read of Cervantes, Lope de Vega, Calderón, Alarcón, Tirso de Molina, as well as selections from Ford's A Spanish Anthology. Open to students who have completed courses 11 and 12 or their equivalent.

3 units, 1st semester (Allen) MWF 8:15

15. Elementary Italian.—Grandgent's Italian Grammar. A continuous course open to all.

3 units, both semesters (Smith) MWF 8:15

15a. Elementary Portuguese.—While due emphasis is placed on grammar and reading, special attention is given to the spoken language.

3 units, both semesters (Vann) MWF 9:15

16. Dante and the Divine Comedy.—Lectures, with assigned readings. Open to juniors and seniors in all departments.

2 units, 2d semester (Johnston) TTh 8:15

[Course 16 alternates with course 25.]

Courses for Undergraduates and Graduates

17. Outline Course in the History of French Literature.—Lectures and discussions, collateral reading and reports. Not open to freshmen. Prerequisites: courses 2 and 3 or course 5, or their equivalents. Conducted in French.

3 units, both semesters (Smith) MWF 9:15

18. The French Novel.—Lectures in English. Emphasis will be placed on the study of the realistic-naturalistic movement of the 19th century. Extensive reading outside of class and discussion of representative works. Prerequisites: courses 2 and 3 or 5.

3 units, 1st semester (De Vries) MWF 8:15

19. Realism in the Modern French Drama.—Lectures in English on the realistic movement in the French drama since 1850. Extensive reading outside of class and discussion of plays of representative modern authors. Prerequisite: course 17 or 18 or an equivalent.

2 units, 2d semester (De Vries) [Not given in 1915-16.]

20. Literary Criticism.—Lectures in English on the history of literary criticism in France from the Renaissance to modern times. Emphasis is laid on the 19th century.

2 units, 2d semester (De Vries) TTh 11:15

21. The Romantic Movement in France, Italy, and Spain.—(*a*) First semester: Neo-classicism in the Romance countries. Rousseau, Bernardin de St. Pierre, Chateaubriand, the Italian Romanticists. (*b*) Second semester: The French and the Spanish Romanticists. The course is intended for seniors and graduates having a good knowledge of one Romanic language. The lectures will be in French. Each student will be expected to read widely in either the French, the Spanish, or the Italian field.

2 units, both semesters (GROJEAN) TTh 9:15

22. Modern Spanish Novel.—A study of the modern Spanish novel and its relation to the development of the novel in France and other European countries. Lectures and collateral readings. Conducted in Spanish.

2 units, 2d semester (ALLEN) [Not given in 1915-16.]

23. Modern Spanish Drama.—(*a*) A rapid survey of the development of the Spanish drama in the nineteenth century, with a study of the more important works of Rivas, Gutiérrez, Zorrilla, Bretón de los Herreros, Ayala, Echegaray. (*b*) A study of the significant works of the contemporary dramatists, especially Benavente, the Quintero brothers, Dicenta, Marquina and Martínez Sierra. Lectures and collateral readings. Conducted in Spanish.

3 units, 1st semester (ESPINOSA) MWF 9:15

24. Outline Course in the History of Spanish Literature.—Lectures with reading of important works and reports by the members of the class. Open to students who have completed course 14 or its equivalent. Conducted in Spanish.

3 units, 2d semester (ALLEN) MWF 8:15

25. Advanced Italian.—Dante, La Divina Commedia. Translation course open to students who have completed course 15.

3 units, both semesters (JOHNSTON) [Not given in 1915-16.]

26. Teachers' Course in French.—Lectures on methods of teaching French, study of the available text-books, review of French grammar. Open only to advanced students.

2 units, 1st semester (JOHNSTON) TTh 11:15

COURSES FOR GRADUATES

27. Origins of Spanish Drama.—A history of the drama from the earliest times to its full development with Lope de Vega. Lectures and collateral reading. Conducted in Spanish.

2 units, 1st semester (ALLEN) [Not given in 1915-16.]

28. Introduction to the Study of Old Spanish.—Reading and interpretation of old Spanish texts. Lectures on old Spanish Phonology and Morphology, with linguistic exercises based on El Cantar de mio Cid. Ford, Old Spanish Readings, Biblioteca de Autores Españoles, vol. LVII.

3 units, 1st semester (Espinosa) [Not given in 1915-16.]

29. Spanish Historical Grammar.—Lectures and study of Old Spanish texts. Hannsen, Gramática Histórica Castellana, Halle, 1913.

2 units, 1st semester (Espinosa) T 10:15-12:15

30. Old Spanish Ballads.—History of Spanish epic poetry from the cantares de gesta to the romances. Lectures, readings, and investigations on special topics.

3 units, 2d semester (Espinosa) MWF 9:15

31. Spanish Seminary, Lope de Vega.—Topics assigned to each student.

2 units, 1st semester (Allen) TTh 8:15

32. Romance Versification.—The fundamental principles of Romance verse structure, with particular attention to French and Spanish. Lectures and practical exercises.

3 units, 2d semester (Espinosa) [Not given in 1915-16.]

33. Introduction to the Study of Old French.—Reading of selected passages from Bartsch-Wiese, Crestomathie de l'Ancien Français (Leipzig, Vogel, 1908), with a study of Old French Phonology and Morphology.

3 units, 1st semester (Johnston) MTTh 1:30

34. French Historical Grammar.—Lectures on Old French Phonology and Morphology.

2 units, 2d semester (Johnston) [Not given in 1915-16.]

35. Old French Literature.—Lectures, with assigned readings.

2 units, both semesters (Johnston) [Not given in 1915-16.]

36. Introduction to the Study of Old Provençal.—Readings of selected passages from Appel's Provenzalische Chrestomathie, with a study of Old Provençal Phonology and Morphology.

3 units, 2d semester (Johnston) MTTh 1:30

37. French Seminary.—Origin of the Old French Feudal Epic. Topics assigned to each student.

2 units, both semesters (Johnston) W 2:30-4:30

38. Journal Club.—The instructors in the department and the advanced students meet regularly on alternate Fridays for the discussion of the periodicals and new books. F 2-3

ENGLISH

William Herbert Carruth, Raymond Macdonald Alden, John S. P. Tatlock, Professors.

Lee Emerson Bassett, Associate Professor.

†Samuel Swayze Seward, Jr., Howard Judson Hall, †Henry David Gray, William Dinsmore Briggs, Everett Wallace Smith, [1]Elizabeth Church, Assistant Professors.

Theresa Russell, Edith Ronald Mirrielees, Frank Ernest Hill, Elisabeth Lee Buckingham, Arthur Garfield Kennedy, Instructors.

Evelyn Wight Allan (Dean of Women), Margery Bailey, William Thomas Ham, Acting Instructors.

Requirements for the Degree of Bachelor of Arts

a. The courses ordinarily prescribed in the major subject include Chaucer, Shakespeare, the advanced courses in the History of English Literature (four semesters) and an advanced course in a single author (as Milton, Wordsworth, or Spenser), besides such preliminary courses in composition, vocal expression, or literature as may be advised in individual cases. In the advanced courses in English Literature one of two substitutions may be made: (*a*) for the second semester's work in the earlier period, the course in Elizabethan Drama; or (*b*) for the first semester's work in the later period, the course in Modern English Fiction (37). (Students making English their major subject in preparation for journalism may substitute for two of the advanced courses in literature appropriate courses in some other subject, with the approval —to be obtained in advance—of their adviser.)

b. It is required also that each student pursue work in one foreign language and literature sufficiently for the accomplishment of two ends, (1) a practical reading knowledge of the language chosen, and (2) some acquaintance with its most important literature. This requirement is not primarily a matter of formal credit-hours, but will ordinarily be found to demand a minimum of 16 units of college work in the chosen language, aside from elementary courses (two years in the high school or one in the university). Introductory courses in Latin and Greek, if pursued in the University, will be counted as college work. Students should be assured that their language studies are planned so

†Absent on leave, first semester, 1915-16.

as to accomplish the ends desired. (Those who make Latin or Greek their principal language are advised, in general, to include two years of work in a modern language among their elective studies; and those primarily choosing a modern language are encouraged to include among their elections two years of work in Latin or Greek.)

c. A course in English History is also prescribed for those who have not had a separate course in the subject in the high school.

The Teachers' Recommendation.—The High School Teachers' Certificate is granted by the State to students who have fulfilled the State requirements as set forth on pages 88-89 of the *Register*. Recommendation by the Department is granted by vote to students whose work in certain prescribed subjects has been of high character. The undergraduate courses usually prescribed are Vocal Expression, Shakespeare, Chaucer, Versification, English Language, Teachers' English, a full year's course in English literary history, and a half year course in a literary type. The graduate courses, to be chosen on consultation, should include not less than four units of work for each semester of study.

Advanced Degrees

The candidate for the Master's degree in English must have: (1) The equivalent of the requirements for the A. B. degree in English; (2) an elementary knowledge of Old English; and (3) a reading knowledge of two foreign languages (preferably one ancient and one modern).

The work for the degree must occupy at least one full year of graduate study in residence, the greater part in English. The courses in English will be divided between Literature and Philology. The candidate must present a thesis prepared under the direction of a member of the department and demonstrating the candidate's power of concentrated, independent study. This thesis may be accepted in lieu of not more than six units of the work in course.

For the conditions of acquiring the Doctor's degree, see the Graduate Study Bulletin.

LITERATURE AND RHETORIC

Preliminary and General Courses

[In general, courses 1-10 are open to first-year students; courses 11-20 are open to second-year students.]

A. Elementary Composition.—A one-semester course required of

all first-year undergraduates except those who show themselves entitled to exemption.

1 unit, either semester (Mirrielees, Allan) Th 8:15, 9:15, 10:15

[For each student in course A, except in case of those who meet the requirement within a short time, a fee of $10 is charged.]

1a. Vocal Expression.—A study of the principles of expressive reading, and the vocal interpretation of masterpieces in prose and poetry, with supplementary work in voice development. Each student is expected to memorize and vocally interpret some 350 lines of Shakespeare during the semester. The course is open to a limited number of students in the order of their application. Application should be made before the first meeting of the class in the semester, and the instructor reserves the right to refuse to enroll students who do not appear at the first session of the class. Three sections.

3 units, either semester (Buckingham) MWF 8:15, 9:15, 11:15

1b. Reading Aloud.—Practice in the application of the fundamental principles of effective reading to varied types of literature. Prerequisite: course 1*a*.

2 units, either semester (Buckingham) TTh 9:15, 11:15

2. English Composition.—Practical work in narration and description, first semester; in exposition, second semester. In two of the sections exposition is given in the first semester, and narration and description in the second. English majors are expected to enroll in section I (see schedule).

2 units, both semesters (Carruth, Hall, Gray, Briggs, Smith, Church, Hill, Bailey, Ham)

3. Practical Phonetics.—A course in the enunciation and pronunciation of the English language. Designed especially for foreign students.

1 unit, either semester (Bassett) T 3:30

5. English Classics.—A study of representative works of great English writers from Malory to Browning, with assigned reading and writing. Open only to first-year students who are not English majors.

3 units, either or both semesters (Mirrielees)
MWF 1st semester 10:15; 2d semester 10:15, 11:15

6. Outline History of English Literature.—A survey, critical and historical, of English literature in its larger aspects, with readings.

Designed primarily for first-year English major students who have not taken a high school course in the subject.

3 units, 1st semester (CHURCH) MWF 10:15

7. American Literature.—General survey of the history of American literature, with reading of selected representative works. For first-year or second-year students. Not open to students having entrance credit in the subject.

3 units, 2d semester (HALL) MWF 9:15

8. Introduction to Poetry.—A study of the nature, methods, and forms of poetry, with exercises in analysis and interpretation. Open to students of all departments.

3 units, 2d semester (ALDEN) MWF 10:15

9. Extemporaneous Speaking.—Practice in extemporaneous speaking on subjects of current interest, with some attention to the preparation of speech outlines. Three sections, first semester; one section, second semester.

2 units, either semester (BASSETT)
MW 9:15; T 1:30-3:30; Th 1:30-3:30

10. Tennyson.—A study of selected portions of Tennyson's poems, illustrating the growth of his literary art. A general course, designed for first-year students, and open to third-year and fourth-year students only by permission.

3 units, 1st semester (HALL) [Not given in 1915-16]

11. Vocal Interpretation.—*a.* An advanced course in the vocal interpretation of literature. Designed particularly for those who intend to teach English literature. Prerequisite: courses 1*a* and 1*b*.

2 units, 1st semester (BASSETT) MW 1:30

b. Dramatic Literature (second semester). Scenes assigned from Shakespeare and from modern plays of literary merit. Members of the class will vocally interpret characters and scenes assigned for individual study. Prerequisite: course 11*a*.

2 units, 2d semester (BASSETT) MW 1:30

12. Advanced Composition.—Including both rapid writing and the preparation of long themes. Prerequisite: course 2.

3 units, both semesters (RUSSELL) MWF 9:15

13. News Writing.—Practice in abstracting and condensing, writing within time and space limits, copy-reading and headline writing; together with instruction in methods of gathering news and in the

duties of the various members of a newspaper staff. Prerequisite: course 2.

2 units, both semesters (SMITH) TTh 11:15

14. Humor and Satire in English Literature.—An analysis of humor and satire (with the emphasis on the latter) both as abstract qualities and as elements of literature. Historical survey and study of illustrative examples. Not open to first-year students.

3 units, 1st semester (RUSSELL) MWF 11:15

15. Shakespeare.—The first semester's work consists of a rapid reading of a considerable number of the plays in chronological sequence. The second semester is devoted to a careful study of three or four plays. Open in the first semester to all second-year students; in the second semester to English majors and such others as show special interest and aptitude.

3 units, either or both semesters (ALDEN, GRAY) MWF 10:15

16. English Bible.—Representative portions of the Bible studied as literature, with some consideration of the history and the prose style of the English versions. Not open to first-year students.

3 units, 2d semester (RUSSELL) MWF 10:15

17. Essay Writing.—Preparation of magazine articles, criticisms, and papers of both informal and analytical character. Prerequisite: course 2.

2 or 3 units, both semesters (RUSSELL) W 2:30-4:30

18. Practical Debate.—Under supervision of the Department, students who wish to do a prescribed amount of active debating and briefing of debates in connection with either of the debating societies, and those students who make the practice squads for any intercollegiate debate, may receive credit, upon satisfactory completion of the work.

1 or 2 units, either or both semesters (BASSETT, HILL, LEIB)

19. English Literature of the Revolutionary Era.—A study of the writings connected with the French Revolution and related movements, with emphasis on ideas rather than literary form.

2 or 3 units, 1st semester (ALDEN) [Not given in 1915-16.]

20. Victorian Literature.— (*a*) A survey of Victorian prose, with special emphasis upon Carlyle, Ruskin, and Arnold (first semester). (*b*) A study of selected Victorian poets (second semester).

2 units, either or both semesters (HALL, SEWARD) TTh 9:15

Advanced and Special Courses

[Unless otherwise specified, the following courses are open to third-year and fourth-year students of all departments.]

21a. Public Speaking.—Practice in the preparation and delivery of speeches adapted to various audiences and occasions, with attention to the style of spoken discourse, based on a study of masterpieces of oratory. Prerequisite, course 9. Two sections.

2 units, 2d semester (Bassett) T 1:30; Th 1:30

21b. Public Reading.—A course in the preparation of poems, stories, and scenes from novels and plays for public presentation. Open to a limited number only.

2 units, both semesters (Bassett) M 2:30-4:30

22. Oral Debate.—Practice in the preparation and delivery of oral arguments, chiefly on current public questions. Open to a limited number of students who have had satisfactory experience in public speaking, to be admitted in the order of application.

2 units, both semesters (Bassett, Hill) W 2:30-4:30

23. Exposition.—An advanced course. Special attention will be given to students preparing theses or other papers. Prerequisite: course 2 or equivalent.

2 units, 2d semester (Hall) TTh 9:15

24. Argumentation.—The theory of argumentation, with practice in the preparation of briefs and forensics. Open to all students who have made a satisfactory grade in English 2.

2 units, both semesters (Hill) TTh 11:15

25. Short Story Writing.—Practice in the writing of short stories, and a study of the principles governing their composition.

3 units, both semesters (Mirrielees) T 1:30

25b. Conferences dealing with the construction of the short story. Open by permission to students who have completed English 25.

2 units, both semesters (Mirrielees) W 1:30

26. Play Construction.—The principles of dramatic writing developed in connection with the student's own work, together with the critical analysis of certain successful plays of the present.

2 units, 2d semester (Gray) [Not given in 1915-16.]

27. Current Newspapers.—The study and comparison of current daily newspapers with a view to observing their policies and ideals as

shown in the news columns. Ordinarily English 13 should precede this course.

3 units, both semesters (SMITH) MWF 11:15

28. American Poetry, Exclusive of the Drama.—A study of the greater American poets with especial reference to their relation to English and Continental literature. [In 1915-16 attention will be directed especially toward the reception and standing of these poets in foreign countries.] Open also to graduates.

3 units, 1st semester (CARRUTH) WF 8:15

29. National Epics.—Reading in translation of the Mahabharata, the Iliad, the Aeneid, the Shah-Nameh, the Nibelungenlied, the Song of Roland, the Beowulf, and the Kalewala. Open also to graduates.

3 units, 2d semester (CARRUTH) WF 8:15

30. Prosody and Verse Writing.—Study of lyric poems, with practical exercises in the same. Open also by permission to second-year students who have had four units in English composition.

2 units, 2d semester (CARRUTH) T 3:30-5:30

31. The English Drama to 1642.—The beginnings and development of the drama.

3 units, 1st semester (BRIGGS) MWF 10:15

32. English Literature from 1700 to 1832.—Primarily for third-year students of the English department.

3 units, both semesters (HALL, ALDEN) MWF 11:15

33. Milton.

2 units, 1st semester (BRIGGS) [Not given in 1915-16.]

34. Wordsworth.

2 units, 1st semester (HALL) TTh 10:15

35. Introduction to Comparative Literature.—An exposition of the comparative method in literary study, with a survey of the distribution of types in world literature. Open to third-year and fourth-year students who have had not less than ten units in English literature.

2 units, 1st semester (CARRUTH) TTh 9:15

36. The History of Prose Fiction.—Including the beginnings of English fiction to DeFoe.

3 units, 2d semester (CARRUTH) WF 9:15

37. English Fiction.—A course in the history of English fiction, from DeFoe through the major novelists of the nineteenth century.

3 units, 1st semester (CHURCH) MWF 9:15

38. The Modern Novel.—The reading of one novel a week, supplemented by lectures covering additional works of the authors studied and some account of other important novelists of the time.

3 units, 1st semester (GRAY) [Not given in 1915-16.]

39. The Modern Drama.—A study of certain significant dramas of Ibsen, and of contemporary dramatists.

3 units, 2d semester (GRAY) MWF 9:15

40. The Romantic Revival.—A study of the development of English romanticism during the eighteenth century. Open to seniors and graduates.

2 units, 2d semester (HALL) [Not given in 1915-16.]

41. Browning.

2 units, 2d semester (RUSSELL) Th 2:30-4:30

42. Teachers' Course in English.—A study of the methods of teaching Composition (first semester) and Literature (second semester) in secondary schools. Open to fourth-year students.

2 or 3 units, both semesters (CHURCH, SEWARD) W 1:30-3:30

43. Versification.—An introduction to the theory of rhythm and metre, the history of English prosody, and the problems of reading and teaching verse. Open to fourth-year students and graduates; to third-year students by special permission.

2 units, 1st semester (ALDEN) WF 9:15

44. Medieval Literature from the Old English Period to 1557.—Primarily for fourth-year students of the English department.

3 units, 1st semester (TATLOCK) MWF 11:15

45. English Literature from 1557 to 1700, Exclusive of the Drama.—Primarily for fourth-year students of the English department.

3 units, 2d semester (BRIGGS) MWF 11:15

46. Spenser.—Primarily for fourth-year students of the English department.

2 units, second semester (BRIGGS) TTh 11:15

GRADUATE COURSES

[Open also by consent of the instructor to advanced undergraduates.]

50. Tragedy.—A comparative study of the theory and practice of tragedy in various literatures.

2 to 4 units, both semesters (ALDEN) T 2:30

51. Comedy.—An inquiry into the nature of the comic and into its literary uses, as exemplified especially in the drama.

2 units, 2d semester (SEWARD) MW 11:15

52. The English Lyric.—A study of the several forms of English lyrical poetry, each in its historical development.
2 to 4 units, 2d semester (GRAY) M 1:30

53. Shakespeare.—A critical study of one or more plays.
2 to 4 units, 1st semester (GRAY) [Not given in 1915-16.]

54. Shakespeare's Sonnets.—A critical study.
2 units, 1st semester (ALDEN) M 1:30-3:30

55. Jonson.
2 to 4 units, both semesters (BRIGGS) M 3:30-5:30

56. Marlowe.
2 to 4 units, 1st semester (BRIGGS) Th 3:30-5:30

57. Tennyson.—The Idylls of the King compared with their sources.
2 units, 1st semester (CARRUTH) Th 1:30-3:30

58. The Hildebrand Theme in General Literature.—A study of the source and migration of epic themes.
2 units, 2d semester (CARRUTH) [Not given in 1915-16.]

59. Journal Club: Literary Section.—Reports on current literature by the members of the course.
1 unit, both semesters (CARRUTH) Th 1:30

PHILOLOGY

1. Old English.—Elements of Old English Grammar with reading exercises.
3 units, 1st semester (KENNEDY) MWF 8:15

2. English Language.—An outline study of English in the light of its historical development.
2 units, 2d semester (SEWARD) TTh 8:15

3. Chaucer.—This course is an elementary one, and includes an outline of Middle English Grammar for the beginner. Open to third-year students who have a reading knowledge of one foreign language. For special outside work an extra credit will be given.
2 or 3 units, 1st semester (KENNEDY) Th 1:30-3:30

4. Beowulf.
2 units, 1st semester (TATLOCK) M 3:30-5:20

5. Middle English Grammar.—(a) Phonology; (b) Morphology.
2 units, 1st semester (KENNEDY) M 1:30-3:30

6. Middle English Readings.
2 units, 2d semester (KENNEDY) M 1:30-3:30

7. Chaucer (advanced course).—Interpretation of the Prologue, the "Links," and lectures on the history of Chaucer criticism. Prerequisite: course 3 or its equivalent. Open to fourth-year students of other departments. For special outside work an extra credit will be given.

2 or 3 units, 2d semester (TATLOCK) Th 1:30

8. Ballads and Lyrics.—[As "Teachers' Course," 3 units.]

2 units, 2d semester (TATLOCK) [Not given in 1915-16.]

9. English Paleography.

2 units, both semesters (TATLOCK) [Not given in 1915-16.]

10. History of English Philology.—Lectures.

2 units, 1st semester (———) [Not given in 1915-16.]

11. Seminary.—Papers and Lectures.

2 units, both semesters (TATLOCK) W 3:30-5:30

12. The Principles of English Philology.

2 units, 2d semester (KENNEDY) W 9:15-11:15

JOURNALISM

The following curriculum is outlined for the guidance of students intending to enter journalism. It is based on the conviction that the best preparation for the journalistic career is the broadest possible college course with a preponderance of English, History, and Economics. The intending journalist will make one of these his major department, in accordance with his inclinations and with the advice of the instructor in journalism and the head of the department. He will be subject to the direction of the major department in conjunction with the instructor in journalism. He will be classified and his diploma marked, if so desired, "English (Economics, History) preparatory to Journalism." Intending journalists are encouraged to compete for opportunities to engage in college journalism and thus to obtain all possible practical experience during their course. When done systematically and under the direction of the instructor in journalism provision is made for a just amount of credit for such work.

DISTRIBUTION OF WORK

(*a*) English (15), Economics (15), History (15), Journalism (15); total, 60 units.

(*b*) Selection from at least five of the following divisions: Biology, Physical Science, Geology, Astronomy, Physiology and Hygiene, Phil-

osophy and Psychology, Sanitary Engineering, Law, Medical Theory, Education; total, 30 units.

(*c*) Margin to complete requirements of major department, and for free choice, 30 units.

[A tentative working schedule of a four-years' curriculum in accordance with this outline will be furnished on application.]

1. News Writing.
2 units, both semesters (SMITH) TTh 11:15

2. Editorial Writing.
1 unit, both semesters (SMITH) T 9:15

3. News Analysis.
1 unit, both semesters (SMITH) Th 9:15

4. Correspondence.
2 units, both semesters (SMITH) [Not given in 1915-16.]

6. Practical Reporting.
3 units, both semesters (SMITH) MW 1:30

7. Editorial Management.
3 units, both semesters (SMITH) WTh 11:30

COMPARATIVE LITERATURE

The following courses offered by the various departments of literature in the University pursue the comparative method and contribute to a survey of the literature of the world and the relations of the several literatures to one another. English majors are advised to elect as many as possible of these courses. Detailed description and the conditions of election are given under the respective departmental announcements.

INTRODUCTION TO COMPARATIVE LITERATURE. [English 35.]
THE ENGLISH BIBLE. [English 16.]
GREEK LITERATURE. [Greek 22.]
LATIN LITERATURE. [Latin 32.]
MEDIEVAL LITERATURE. [English 44.]
HISTORY OF GERMAN LITERATURE. [German 13.]
THE REVOLUTIONARY ERA. [English 19.]
THE 18TH CENTURY. [English 32.]
THE VICTORIAN ERA. [English 20.]
NATIONAL EPICS. [English 29.]
THE GREEK EPIC. [Greek 19.]
THE HILDEBRAND THEME. [English 58.]

Dante and the Divine Comedy. [Romanic Languages 16, 25.]
Chaucer. [English Philology 3 and 7.]
Tennyson: the Sources of the Idylls of the King. [English 57.]
The History of Prose Fiction. [English 36.]
English Fiction. [English 37.]
The Romantic Revival. [English 40.]
The Modern Novel. [English 38.]
Modern German Novels. [German 5.]
The French Novel in the 19th Century. [Romanic Languages 18.]
The Development of Tragedy. [English 50.]
Comedy. [English 51.]
Greek Tragedy. [Greek 20.]
Roman Comedy. [Latin 8.]
The English Drama to 1642. [English 31.]
The Modern Drama. [English 39.]
Origins of the Spanish Theater. [Romanic Languages 27.]
The French Drama in the 19th Century. [Romanic Languages 19.]
Ballads and Lyrics. [English Philology 8.]
The English Lyric. [English 52.]
Latin Seminary: Lyric Poetry. [Latin 22.]
Greek Sculpture. [Greek 21.]
Roman Art and Archaeology. [Latin 31.]
History of German Civilization. [German 21.]
The Classical Influence in English Literature. [Latin 33.]
American Poetry in Relation to European. [English 28.]

BIBLICAL HISTORY AND LITERATURE

David Charles Gardner, Chaplain, Lecturer.
Augustus Taber Murray (Department of Greek), Theresa Peet Russell (Department of English Literature).

1. Life and Teaching of Christ.—A history of the life and times of Jesus, with a study of the four Gospels, an analysis of the Ethics of Jesus, and the application of his teaching to the life of to-day. Lectures, discussions, and papers.

1 unit, both semesters (Gardner) Th 1:30

English Bible.—Representative portions of the Bible studied as literature, with some consideration of the history and the prose style of the English versions. Not open to first-year students. [English 16.]

3 units, 2d semester (Russell) MWF 10:15

New Testament Literature.—A critical introduction to the literature of the New Testament for general students; no knowledge of Greek is presupposed. Lectures with assigned readings. [Greek 23.]
2 units, 1st semester (MURRAY) TTh 11:15

Greek Testament.—A study of the book of Acts in the Greek, with passages from the letters of Paul. [Greek 12]
2 units, 2d semester (MURRAY) TTh 11:15

PHILOSOPHY

HENRY WALDGRAVE STUART, Professor.
HAROLD CHAPMAN BROWN, Assistant Professor.

[Courses 1 and 7 only are open to first-year students; courses 1 to 5 inclusive presuppose no previous work in the department.]

1. Elementary Logic.—The principles of Deductive and Inductive Logic, with special attention to the important types of fallacy.
3 units, 1st semester (STUART, BROWN) MWF 9:15

2. Elementary Ethics.—The ethical meaning of Goodness and Badness, the rise and development of the distinction in the experience of the individual, and the working principles upon which goodness of conduct and character depends.
3 units, 1st semester (STUART) MWF 10:15

3. History of Philosophy.—The development of philosophical theories from the early Greek period to the end of the eighteenth century in Germany, with a brief outline of philosophical movements in the nineteenth century. Attention will be given throughout to the relations of philosophy with social and political conditions and with science, literature, and religion.
3 units, both semesters (BROWN) MWF 8:15

4. Modern Scientific Conceptions of Nature and Mind.—A study of current views of cosmic structure and the place of man and his activities in nature, in the light of recent developments in physical chemistry, evolutionary biology, and psychology.
3 units, 1st semester (BROWN) MWF 11:15

5. Esthetics.—The origins and nature of art. Its significance for religion, morality, and social life. The rise of art forms. Contemporary theories of esthetics.
2 units, 2d semester (BROWN) TTh 9:15

6. Philosophy of the Nineteenth Century.—The development of philosophical problems and theories since Kant, in France, Germany, and England will be studied with special reference to the change of intellectual outlook initiated toward the end of the century by developments in the sciences. Prerequisite: course 3.

2 units, 2d semester (Brown) TTh 10:15

7. Advanced Logic.—Methods of investigation in use in the natural and social sciences, and the cardinal assumptions and principles on which these methods are based. Prerequisite: course 1 or an equivalent.

3 units, 2d semester (Stuart) MWF 9:15

8. The Social Order and the Individual.—The nature of society and the types of social organization. Social authority and individual initiative. The political obligations of the individual and the ethical basis of political institutions and of law. A continuation of course 2; open on approval to students otherwise qualified.

3 units, 2d semester (Stuart) MWF 10:15

9. Outlines of General Philosophy.—Prerequisite: six units in the department or course 4, or fourth-year standing with approval.

a. Chapters from representative contemporary writers, with syllabus and occasional lectures. (First semester.)

b. A constructive treatment (in lectures) *of the main problems of metaphysics and the theory of knowledge* as presented in the readings of the first half. Short papers on assigned topics. (Second semester; not given in 1915-16.)

2 or 3 units, both semesters (Stuart) TTh 11:15

10. Seminary.—Henri Bergson and Bertrand Russell.

(Stuart) By arrangement

PSYCHOLOGY

†Frank Angell, Lillien Jane Martin, Professors.

John Edgar Coover, Assistant Professor and Research Fellow in Psychic Phenomena.

Gertrude May Trace, Acting Instructor.

1. General Psychology.—Lectures and exercises. Open to first-

†Absent on leave, second semester, 1915-16.

year students by permission. Titchener's Text-book of Psychology is used as a book of reference.
4 units, 1st semester (ANGELL) MTWTh 11:15

1a. **Mental Hygiene.**—Especially for freshmen.
2 units, 1st semester (MARTIN) TTh 8:15

2. **Laboratory Psychology.**—Students are recommended to take this course in connection with courses 1, 1*a*, 3, and 4.
3 units, either or both semesters (MARTIN, ANGELL) TTh 1:30

2a. **Laboratory Psychology.**—In connection with Psychology 1 or its equivalent.
3 units, 2d semester (TRACE, COOVER) MWF 1:30

3. **Abnormal Psychology.**—Not open to first-year students except by permission.
2 units, 2d semester (MARTIN) TTh 8:15

4. **Psychology of the Fine Arts.**—Open to freshmen by permission.
2 or 3 units, 1st semester (MARTIN) MWF 8:15

5. **Advanced Laboratory Work.**
3 units, both semesters (ANGELL, MARTIN, COOVER) MWF 1:30

6. **Space Perception.**—Usually presupposes or accompanies course 5.
2 units, 2d semester (ANGELL) [Not given in 1915-16.]

7. **Current Psychological Literature.**
1 unit, 2d semester (MARTIN) By arrangement

8. **Systematic Psychology.**—Open to advanced students.
2 units, 1st semester (MARTIN) By arrangement

9. **History of Psychical Research.**
2 units, 2d semester (COOVER) [Not given in 1915-16.]

10. **Psychical Research Laboratory.**
2 units, 2d semester (COOVER) TTh 1:30-4:30 by arrangement

11. **Mind and Body.**—Course 1 prerequisite.
3 units, 2d semester (COOVER) MWF 10:15

12. **Research Work.**
(ANGELL, MARTIN) By arrangement

EDUCATION

*Ellwood Patterson Cubberley, Professor.
Percy Erwin Davidson, Rufus Clarence Bentley, Lewis Madison Terman, Associate Professors.
Jesse Brundage Sears, Assistant Professor.
Morris Elmer Dailey, George Archibald Clark, Lecturers.
†J. Harold Williams, Research Fellow on the Buckel Foundation.
‡George H. Ordahl, Research Fellow on the Buckel Foundation.

The Department of Education offers five main lines of work:

1. Courses of a general nature on the history, function, and administration of public education, intended in part as information courses for the general university student and without reference to the work of teaching. To such students the courses of Groups I and II are recommended.

2. Courses intended to assist other departments in preparing their students for work in secondary schools. All such students should confer with members of the Department of Education as to courses, but in general courses 1, 2, and 20 are recommended, if the candidate has not had experience in teaching. Three units of work in courses relating to secondary-school work are required under the regulations of the California State Board of Education for the high school teacher's recommendation, as are courses 25 and 26, if the candidate has not had previous experience in teaching. (For a more detailed statement, see *Register*, pp. 85-88.)

3. Courses primarily for major students, or those making Education a minor, and intended to give special preparation to (*a*) those who desire to become teachers of Education in normal schools or colleges, (*b*) those who wish to prepare for supervisory or administrative positions in the public schools, elementary or secondary, and (*c*) those who wish to prepare for special educational work in the elementary or secondary field.

4. Courses and research work in the psychology and pedagogy of exceptional children. Two lines of work are offered in this field: (*a*) elementary courses designed to give prospective superintendents and principals a general acquaintance with the problems of special education, and (*b*) research courses for the advanced student who looks forward to work as clinical psychologist in the public schools or in insti-

*Absent on leave, second semester, 1915-16.
†Resigned, November 1, 1915.
‡Beginning, November 1, 1915.

tutions for defectives or delinquents. The Dr. C. Annette Buckel Foundation, supplemented by additional support from the Board of Trustees of the University, has provided for a "research fellowship in the psychology and pedagogy of backward children."

5. Courses for the preparation of teachers of drawing for the public schools, and for the general training of college students in artistic perception and graphic expression. (See division of Graphic Art.)

The courses in Education are open to all students as electives or as minor subjects, but only those who desire to prepare for one of the lines of work mentioned above under (3) or (4), and whose preparation and experience are satisfactory to the Department, will be accepted as major students. In special cases those without teaching experience may be accepted as major students, but all such must register for courses 25 and 26 as soon thereafter as arrangements can be made.

Major Requirements

Major students begin their work in Education with the sophomore year, taking courses 1 and 2. Psychology 1 and *2a* should also be taken this same year. Physiology 1, Zoology 1, or Botany 1, the course in Bionomics, and Economics 1, should also be taken early in the student's course. Other collateral work will be advised to meet individual needs. For graduation in Education students will be expected to have completed 30 units in the Department, including practice in teaching. This should ordinarily include courses 1, 2, 3 or 4, 10, 12 or 14, one advanced course listed under Group IV, and sufficient other courses listed under Groups I, II, or III to make up the required units. For students in the division of Graphic Art, 15 units of work in Education will be required. Students coming with advanced or graduate standing from other universities, where the curriculum does not parallel that offered here, may have substantially equivalent preparation or experience accepted in lieu of the courses required here.

The requirements for the baccalaureate degree cover only introductions to the different fields of Education, and it is assumed that those proposing to offer themselves for responsible positions in educational work, such as those indicated under 3, above, will proceed at once to the Master's degree. For this at least twenty units in advance of the baccalaureate requirements, together with the presentation of a satisfactory thesis, will be required. Work in Group I will not be included, and ordinarily one-half of the twenty units must be work listed under Group IV. The completion of the first year of graduate study should

mean a somewhat general acquaintance with the different divisions of Education, together with the beginnings of specialization in some one of these. Those who desire to prepare for the type of positions indicated under 4, should proceed to the doctorate.

During the second year of graduate study the student will be expected to attain a mastery of the literature and practice in two of the following divisions of the subject: (1) History of Education, (2) Theory of Education, (3) Administration of Education, (4) Educational Psychology, (5) Educational Hygiene. Students intending to proceed to the doctorate, either at once or later, should select one of these divisions as a major and one as a minor; complete in large part the required work in a second minor, outside of the Department; pass off the modern language requirements; and get well started on the dissertation.

Library and Practical Facilities

The general university library contains the important recent books, and files of the more important educational magazines, both American and foreign. The collection of early American educational magazines and reports is also good. The special library of the Department, consisting of about 7500 volumes, contains one of the most complete collections of American state and city school reports to be found in the United States, the library ranking third in this respect. It is also rich in old college and normal school catalogues and text-books, of much historical value. The collection of old and present-day school text-books is also large and valuable.

In practical facilities the department has good working connections with the State Normal School at San Jose, and with the public schools of the immediate vicinity. For more important studies by advanced students the large school systems in the vicinity of the University can be used, and a kindergarten class and a class of retarded pupils are available for careful systematic instruction and study.

The department is also provided with a research laboratory for use in connection with the Buckel Foundation. This is well equipped with the apparatus, blanks, and other materials used in mental and physical tests.

I. Elementary and Introductory Courses

[Open to any one with teaching experience, and to all others except first-year students.]

1. **Public Education in America.**—A study of the development, province, and some of the more important problems of public

education in the United States. An introductory course. Lectures, following a syllabus, with assigned readings.

2 units, 1st semester (Cubberley) TTh 10:15

2. Educational Theory.—An introductory course dealing with topics fundamental to education, such as the meaning of infancy, tradition, heredity and environment, types of learning, the order of growth, character, etc. Lectures, following a syllabus, with assigned reading.

2 units, 2d semester (Davidson) TTh 10:15

3. History of Education in Europe.—A study of the development of educational ideals and systems from the time of the Greeks to the present. Following a rapid survey of the Greek, Roman, and mediaeval periods, the main emphasis will be placed upon educational developments subsequent to the Reformation and Renaissance movements.

3 units, 1st semester (Sears) MWF 9:15

4. History of Education in America.—A history of American educational ideals and practices, with some emphasis upon our European antecedents and those features which are peculiarly American.

3 units, 2d semester (Sears) MWF 9:15

5. Primary Education.—A study of the history and institutions of the formal education of young children; provisions in other countries; the kindergarten in America; the reforms of Montessori and others; pedagogy of the primary-school period.

3 units, 1st semester (Davidson) MWF 11:15

II. More Advanced Courses, but of a Somewhat General Nature

[Open to teachers, and to third- and fourth-year students. In general, courses 1 and 2 should precede these courses. Course 3 should precede or accompany course 31.]

10. Physical Aspect of the Child.—This course will include a consideration of the following topics: growth in height and weight; growth of parts and organs; common abnormalities of eye, ear, nose, throat, spine, heart, lungs, and teeth; nervous disorders, speech defects, malnutrition, mortality, and mental deficiency; physiological aspects of sleep, work, play, and rest.

2 units, 1st semester (Terman) TTh 11:15

11. Educational Hygiene.—The medical inspection of schools; educational adaptations for defectives; hygiene instruction in the schools; the hygiene of the school plant.

1 unit, 2d semester (Terman) Th 11:15

12. Social and Moral Education.—A study of the important facts and principles underlying social and moral education, as a basis for a criticism of current educational practice in this country and elsewhere. Prerequisite, General Psychology.

3 units, 1st semester (DAVIDSON) MWF 10:15

13. Primary Education, Advanced Course.—A more thorough study of selected topics in primary education than is possible in course 4. Prerequisites: Primary Education, and General and Experimental Psychology or their equivalents.

2 units, 2d semester (DAVIDSON) TTh 9:15

14. Logic of Education.—A study of the significance for education of the psychology of attention, interest, and thinking. Prerequisite: General Psychology.

3 units, 2d semester (DAVIDSON) MWF 10:15

15. Elementary Education.—A course dealing with the institutional and instructional aspects of the elementary school, with particular reference to the content and the use of the course of study. Intended for prospective teachers and supervisors in the elementary school.

2 units, both semesters (SEARS) TTh 9:15

19. Exceptional Children.—A somewhat general course dealing with the frequency, causes, and consequences of mental deficiency, and with the social and educational treatment of defective, delinquent, or otherwise exceptional children. Prerequisite: General Psychology.

2 units, 1st semester (TERMAN, WILLIAMS) S 10:15-12:15
1 unit, 2d semester (ORDAHL) S 10:15-11:15

III. Courses Intended Primarily for Those Preparing to Teach in Secondary Schools

[Open to juniors, seniors, and graduate students. Course 25 should precede course 26 by one semester.]

20. High School Teachers' Course.—Intended to give elementary preparation for secondary school service. Open only to inexperienced prospective high school teachers of junior rank or above. Not for Education majors. Deals with the high school as an institution of the local community.

3 units, either semester (BENTLEY) MWF 8:15

21. Principals' Course.—The organization and management of a high school. The principal's organizing and supervising function as distinguished from the work of the teacher or that of the superintend-

ent. Open to students who have had other courses in secondary education.

2 units, 1st semester (BENTLEY) TTh 8:15

22. High School Advisers' Course.—Treats the vocational aspects of secondary school curriculum-making—the relation of high and intermediate school curriculum to individual career. For high school teachers and principals, and acceptable from Education majors for required credit in secondary education. Intended to prepare for expert service as departmental head-teachers, advisers, and principals.

2 units, 2d semester (BENTLEY) TTh 8:15

23. Special Teachers' Courses.—Vocational types of secondary schools. Either semester's work may be taken separately. Alternates with course 36.

a. Technical, commercial, and industrial schools. For prospective teachers and principals of special types of schools.

2 units, 1st semester (BENTLEY) TTh 9:15

b. Rural, village, and agricultural high schools. For prospective teachers and principals.

2 units, 2d semester (BENTLEY) TTh 9:15

24. Adolescence.—A study of the high school pupil with special reference to the needs of students who expect to teach in secondary schools.

1 unit, 2d semester (TERMAN) T 11:15

25. Method and Management of Instruction.—A practical course in class-room management and the theory of instruction. Intended as a preparatory course for those expecting to do practice teaching, and should be taken the semester preceding.

1 unit, either semester (SEARS) M 1:30

26. Practice in Teaching.—Actual practice in the handling of classes and the giving of instruction, with accompanying conferences, as required by the rules of the State Board of Education for a California High School Teacher's Certificate. This may be arranged for at the University, at the San Jose State Normal School, or at any other California State Normal School. Hours for teaching must be arranged in advance: (*a*) if at the University, with Professor BENTLEY; (*b*) if at the San Jose State Normal School, with President DAILEY. Conference with all practice teachers.

4 units, either semester (BENTLEY, DAILEY) M 4:30-5:30

IV. Advanced and Special Courses

[Intended primarily for teachers of some experience, and for students making Education a major or a minor. Open to such, of junior standing or above.]

29. Educational Problems.—A discussion club. Open on invitation.

1 unit, each semester (Cubberley, Terman) Alt. W 7:30-9:30

30. Educational Psychology.—Original endowment; general mental growth; development of the special mental functions; individual differences in relation to heredity, sex, and environment; the psychology of learning; formal discipline. Prerequisites: General and laboratory Psychology.

3 units, both semesters (Terman) MWF 11:15

31. Sources for the History of Education.—A more extensive and intensive study of the sources for the History of Education than is undertaken in connection with courses 3 or 4. Systematic readings, intended primarily to prepare for the teaching of the subject.

2 units, 2d semester (Cubberley) [Not given in 1915-16.]

32. State School Administration.—A study of the educational principles underlying the proper administration of school systems in states and counties, and involving a comparative study of the school laws and school systems of the various American states. The course includes a study of such topics as federal and state policy, forms of control, revenue and its apportionment, the state and the teacher, the state and the child, private and sectarian education, and state oversight and control.

2 units, 1st semester (Cubberley) TTh 11:15

33. City School Administration.—A study of the educational, financial, and administrative principles underlying the proper administration of school systems in cities, with a view to the establishment of principles of action. A thesis on some problem in city school organization or administration required the first semester; and a survey of a city school system required the second semester.

3 units, 1st semester (Cubberley) W 3:30-5:30

34. School Administration Practice.—A laboratory course in school administration practice, dealing with the office and supervisory work of principals of elementary schools and superintendents of schools. Visits will be made to school systems in the vicinity of the University.

2 units, 2d semester (Cubberley) [Not given in 1915-16.]

35. Rural Education.—A course dealing with the social and eco-

nomic factors in the development of rural institutional life; how these explain the present status of the larger administrative and supervisory problems of rural education; and the principles and practical methods essential to their solution. As a part of the work of this course each student will be expected to complete an educational survey of an assigned county, or rural section. Open to advanced students in educational administration.

2 units, both semesters (SEARS) T 2:30-4:30

36. Foreign School Systems.—A comparative study of the more important foreign state school systems, their policy of organization, ideals of work, methods of instruction, training of teachers, courses of study, statistics, and recent reforms. Different national systems will be studied each year.

2 units, both semesters (BENTLEY) [Not given in 1915-16.]

37. Criticism and Supervision of Instruction.—A few advanced students, who have had sufficient teaching experience, will be allowed to undertake the personal investigation, in the schools of the vicinity, of problems in instruction or supervision. Collateral reading and detailed written reports will be required. Enrollment only after conference with the instructor concerned.

1 unit, either semester (BENTLEY, DAVIDSON, SEARS)

38. Experimental Pedagogy.—A survey of the investigations bearing upon the pedagogy of the elementary school subjects and the methods of testing results. Prerequisites: Elementary Education (or teaching experience) and General and Experimental Psychology, or their equivalents.

3 units, both semesters (DAVIDSON) TTh 3:30-5:00

39. Intelligence Tests and the Psychology of Endowment.—The first semester will be devoted to a critical survey of the literature of mental tests, with special reference to the psychological principles of measuring intelligence. During the second semester practice will be given in clinical methods and in the treatment of data. Prerequisite: General and Laboratory Psychology, and Education 30 or its equivalent.

3 units, both semesters (TERMAN) TTh 1:30

40. Thesis Work.—In certain courses, students may be given an additional hour of credit on presentation of a satisfactory thesis on an assigned topic embodying the results of independent work. The consent of the instructor is necessary before registering.

1 unit, either semester

41. Special Courses.—Special work in independent investigations may be provided for students prepared to do advanced work, the nature of the investigation being determined by the student's preparation and needs. Candidates for advanced degrees will ordinarily register their thesis under this course, the number of units of credit being subject to individual arrangement. The members of the instructing staff stand ready to supervise independent investigations in the following fields:

(*a*) History and organization of American Education, and problems in state and city school administration. (CUBBERLEY)

(*b*) Problems in educational theory and elementary instruction. (DAVIDSON)

(*c*) Problems in rural education. (SEARS)

(*d*) Problems in the organization and administration of secondary education. (BENTLEY)

(*e*) Problems in mental development, and in child and school hygiene. (TERMAN)

V. Courses for Teachers of Special Subjects

The following special courses of instruction, and groupings of courses, designed to prepare teachers for special work in the public schools, are open as electives to majors in other departments, or may be taken in conjunction with a major in Education.

1. Commercial Teachers' Training Course

A. Commercial Teachers' Training Course.—A demonstration course in the teaching of shorthand and typewriting, supplemented by discussions and illustrations in the treatment of English, geography, arithmetic, law, and other collateral subjects, the object being to demonstrate a working plan for handling commercial subjects in the high school. Open to junior and senior students intending to take up teaching. One hour of instruction and two hours of practice, three times weekly.

3 units, both semesters (CLARK) [Not given in 1915-16.]

2. Manual Arts Teachers' Course

This curriculum is designed to prepare teachers of the manual arts for work in polytechnic high schools. The full curriculum requires a minimum of 28 units of work, or a minimum of 22 units if preparation in Foundry Work and Pattern Making is omitted. The courses marked with the asterisk are essentials.

*1. Woodworking.—[Mech. Eng. 5.] 2 or 3 units, either semester.

*2. Forge Work.—[Mech. Eng. 1*a* and 1*b*.] 3 units, either semester.

*3. Machine Shop Work.—[Mech. Eng. 7*a* and 7*b*.] 3 units, either semester. (Presupposes Forge Work.)

4. Foundry Work.—[Mech. Eng. 3*a* and 3*b*.] 3 units, either semester.

5. Pattern Shop Work.—[Mech. Eng. 6*a* and 6*b*.] 3 units, either semester. (Presupposes Woodworking and Foundry Work.)

*6. Freehand Drawing.—[Graphic Art.] 3 units, each semester.

*7. Linear Drawing and Lettering.—[Engineering 1*b*.] 1 unit, either semester.

8. Descriptive Geometry.—[Engineering 1*b*.] 1 unit, 1st semester. (Presupposes Algebra, Geometry, and Linear Drawing and Lettering.) 4 units, 2d semester.

*9. Elementary Machine Drawing.—[Mechanical Eng. 11.] 2 or 3 units, either semester. (Presupposes Freehand Drawing, Linear Drawing and Lettering, and Descriptive Geometry.)

This course will take a part of a student's time for two years to complete. If begun in the senior year it can be completed at the same time the Teacher's Recommendation is ordinarily obtained. The best arrangement of the work will be as follows:

Courses	1st Sem.	2d Sem.	3d Sem.	4th Sem.
*Woodworking	2-3	..	..	..
*Linear Drawing and Lettering	1	..	..	..
Descriptive Geometry	1	4	..	..
Foundry Work	3	..	..	..
Pattern Shop Work	..	3	..	..
*Freehand Drawing	..	..	3	3
*Forge Work	..	..	3	..
*Machine Shop Work	..	..	..	3
*Machine Drawing	..	..	..	2-3
Minimum units	7	7	6	8

VI. Courses in Other Departments

The following Teachers' Courses in other departments are designed for students preparing to teach these special subjects in secondary schools. Such courses are usually necessary for the departmental recommendation, and may be counted to the extent of three units as part of the work required in Education for a Teacher's Certificate.

a. Teacher's Course in Greek.—[See Department of Greek.]

b. Teacher's Course in Latin.—[See Department of Latin.]

c. Teacher's Course in German.—[See Department of Germanic Languages.]

d. Teacher's Course in French.—[See Department of Romanic Languages.]
e. Teacher's Course in English.—[See Department of English.]
f. Teacher's Course in History.—[See Department of History.]
g. Teacher's Course in Drawing.—[See division of Graphic Art.]
h. Teacher's Course in Elementary Physics.—[See Department of Physics.]

GRAPHIC ART

Arthur Bridgman Clark, Associate Professor.
Henry Varnum Poor, Assistant Professor.
Chloe Lesley Starks, Instructor.

The work offered aims to meet the needs of the following: students who wish training in artistic perception and graphic expression for its general culture value; students pursuing professional art study while receiving other university training; technical students to whom knowledge of representative drawing is essential; intending teachers of art.

Course 1 or its equivalent must precede all other courses excepting courses 6, 8, and 9. Technical courses may receive credit a second time when continued with sufficient skill.

For Graphic Art students the following is an average programme: First semester—Elementary Still Life (4 units), and Linear Drawing and Lettering (1 unit) or Still Life (2 units); Landscape (3 units); second semester—Organic Form (2 units); Color (3 units); Perspective (2 units). Total, 10 to 12 units the first year.

Design (6 units); Handicraft (4 units); Lectures (4 units). Total, 14 units the second year.

Life (5 units); Color (5 units); Teachers' course (3 units). Total, 13 units the third year.

Life, Illustration, Landscape, or Handicraft. Total, 10 units the fourth year.

The Teacher's Recommendation.—The minimum requirement for the High School recommendation in Graphic Art is course 1 (3 units); chosen from courses 2, 3, and 5 (6 units); courses 10 and 11 (3 units each); course 14 (4 units). Total, 19 units.

1. **Elementary Drawing.**—Introductory course; still-life and drawing in the arcades in charcoal and color. Open to all students.
2 to 4 units, either semester (Starks) TWThF 1:30-4:30

2. Drawing of the Head (elementary).

2 to 4 units, either semester (Poor) MTWTh 1:30-4:30

3. Drawing of the Head (advanced).—A continuation of course 2 from life. Open to second-year students.

3 to 4 units, either semester (Poor) MTWTh 1:30-4:30

4. Color.—Still-life painting in oils. Open to students with credit for four units of drawing.

2 to 5 units, either semester (Poor) By arrangement

5. Landscape.—Beginners will work with charcoal, advanced students with oil.

3 units, 1st semester (Poor) MTW 1:30-4:30

6. Lectures.—Ideals and processes in pictorial and applied art. (First semester) Nineteenth century and living painters. (The paintings at the Exposition in San Francisco will be utilized as far as is practicable). (Second semester) Masters of the Renaissance. Open to all students.

2 units, either or both semesters (Clark) TTh 10:15

7. Organic Form.—Drawing shells, leaf sprays, animal forms, and landscape with reference to decorative elements. The course is conducted primarily as a preparation for design.

2 units, 2d semester (Clark) MT 1:30-4:30

8. Scientific Perspective.—A series of problems involving the mathematical principles of perspective, and the application of these principles in drawing actual buildings and objects. [Course 8 is offered in alternate years.]

2 units, 2d semester (Clark) [Not given in 1915-16.]

9. Science Drawing.—A course designed to assist students in scientific illustration. It includes the drawing of simple scientific subjects in pen outline, line and stipple shading, wash, and line and wash. Pencil and pen landscape for Geology students. Especial attention will be paid to the needs of individual students. Open to science students on advice.

2 units, either semester (Starks) TWThF 11:15; TTh 9:15-12:15

10. Teachers' Course.—For intending teachers and supervisors of drawing. Consisting of lectures upon methods and aims in school curricula and in the practical work of preparing courses of study. Open to advanced students only. [Offered in alternate years.]

3 units, 2d semester (Clark) [Not given in 1915-16.]

11. Design in Handicrafts.—Exercises in the principles of space

filling, borders, squares, patterns, etc.; applied design in pottery, block printing, and embroidery of textiles, and in tooled leather.

3 units, 1st semester (Clark, Starks) MTW 1:30-4:30

12. House Designing and Furnishing.—A study of taste, convenience, and economy in house designing and furnishing; types of exteriors, arrangements of grounds, plans, interior arrangements, textiles and other furnishings. (Textiles in charge of Mrs. Starks.) [Given in alternate years.]

2 units, 2d semester (Clark, Starks) MTW 1:30-4:30

13. Illustrating.—Practice in application of life drawing to specific purposes. Must be preceded by course 3.

1 unit, both semesters (Poor) M 1:30-4:30

14. Handicraft.—(First semester) Modelling, glazing, and firing pottery. (Second semester) Making trays, bowls, etc., in copper, and jewelry in silver and semi-precious stones. To follow or accompany course 11.

2 or 3 units, either semester (Clark) ThT 1:30-4:30

15. Seminary.—Modern Art. Discussions and papers.

1 unit, both semesters (Clark, Poor) T 4:30-5:30

HISTORY

Ephraim Douglass Adams, Arley Barthlow Show, †Edward Benjamin Krehbiel, Payson Jackson Treat, Professors.
Henry Lewin Cannon, Associate Professor.
†Edgar Eugene Robinson, ‡Percy Alvin Martin, Assistant Professors.
Thomas Maitland Marshall, Acting Assistant Professor.
Yamato Ichihashi, Instructor.
[1]Eugene Ellis Vann, Acting Instructor.
David Starr Jordan, Ralph Haswell Lutz, Lecturers.

The Teacher's Recommendation.—To obtain a Teacher's Recommendation in History the applicant must have completed, in a manner acceptable to the Department, three of the courses, 3, 4 (or 11*a* or 11*b*), 5, 6, and 7, one advanced course (throughout one year), and the Teachers' Course in History (History 16).

Journalism.—Students taking History as a major with the inten-

†Absent on leave, 1915-16.
‡Absent on leave, first semester, 1915-16.

tion of preparing for journalism are referred to the heading "Journalism" on page 30.

INTRODUCTORY COURSES

1. Historical Training Course.—A practical course in the finding and handling of historical material. Required of, and limited to, first-year History majors.

1 unit, 2d semester (MARTIN) T 8:15

[History of Greece.—See Greek 24 and 25.]

[History of Rome.—See Latin 29.]

[Studies in Roman History.—See Latin 30.]

3a. The Early Middle Ages, 395-1095.—A general course, open to all students.

3 units, 1st semester (SHOW) MWF 10:15

3b. The Later Middle Ages, 1095-1492.—A continuation of course *3a*. Open to all students who have had course *3a* or a satisfactory equivalent.

3 units, 2d semester (SHOW) MWF 10:15

4a. English History to 1485.—General outline course, open to a limited number of first-year students. (See course *11b*.)

3 units, 1st semester (CANNON) MWF 8:15

4b. English History from 1485 to the present time.—A continuation of course *4a*.

3 units, 2d semester (CANNON) MWF 8:15

5a. Modern European History, 1500-1715.—A general outline course. Not open to first-year students.

2 units, 1st semester (LUTZ) TTh 9:15

5b. Modern European History since 1715.—A continuation of course *5a*.

2 units, 2d semester (LUTZ) TTh 9:15

6a. American History, 1607-1760.—A study of the English colonization of the Atlantic Seaboard and of the westward movement of colonists of the British Empire. An introductory course open to students of all departments.

3 units, 1st semester (MARSHALL) MWF 10:15

6b. American History, 1760-1815.—A study of the Revolution and the Constitution. Particular attention is paid to western migration,

the development of frontier areas, and the influence of the West on national affairs. A continuation of 6*a*.

3 units, 2d semester (MARSHALL) MWF 10:15

7. United States History since 1815.—Open to students who have had one course in history.

2 units, both semesters (ADAMS) TTh 10:15

8a. History of Japan.—A survey of, and an attempt to interpret, the history of ancient and mediaeval civilization of Japan. Not open to first-year students.

3 units, 1st semester (ICHIHASHI) MWF 9:15

8b. History of Japan.—A critical examination of the more important phases of modern civilization of Japan (since 1600). Open to students who have had course 8*a*, and to others by special permission.

3 units, 2d semester (ICHIHASHI) MWF 9:15

9a. The Far East.—An account of the relations between Western nations and the peoples of Eastern Asia. The history of the Portuguese, Dutch, and British possessions in the Far East. Not open to first-year students.

3 units, 1st semester (TREAT) MWF 11:15

9b. The Far East.—China, Indo-China, Japan, the Philippines. Not open to first-year students.

3 units, 2d semester (TREAT) MWF 11:15

10. History of Latin America.—An outline course dealing with the colonial expansion of Spain and Portugal in America and with the political, social, and industrial development of the leading republics of Latin America. Open to all students.

2 units, both semesters (MARTIN, VANN) TTh 11:15

INTERMEDIATE COURSES

11a. English Constitutional History.—The course attempts to explain the development and operation of the present English constitution as well as to give the background for American constitutional history. Not open to first-year students.

2 or 3 units, both semesters (CANNON) TTh 8:15

11b. English Narrative History.—An intensive course. Open to a limited number of other than first-year students.

4 units, both semesters (CANNON) TWThF 10:15

14a. Constitution of the Holy Roman Empire.—A critical study of select documents illustrative of German constitutional development

from the twelfth to the eighteenth century; designed as an introduction to 14*b*. Open to juniors, seniors, and graduates.

2 units, 1st semester (Show) TTh 10:15

14b. Origins of the German Constitution.—A critical examination of the successive steps in the creation of the German imperial system, from the French Revolution (1790) to the adoption of the present Constitution (1871); based on direct study of the documents. Open to juniors, seniors, and graduates.

2 units, 2d semester (Show) TTh 10:15

15a. The French Revolution and Napoleon.—A lecture course. Supplemented by investigations and reports. Open to students who have had course 5*b*, or an equivalent.

3 units, 1st semester (Lutz) MWF 9:15

15b. Europe Since 1815.—Political, social, and economic. With special reference to the formation of European alliances and alignments of the great Powers. Prerequisite: 5b or an equivalent.

3 units, 2d semester (Lutz) MWF 9:15

16. Teachers' Course.—Lectures, recitations, and practice dealing with the problems of history teaching in elementary and secondary schools.

2 or 3 units, both semesters (Show) TTh 2:30

17a. The Westward Movement.—A survey of the expansion of the American people into the Mississippi Valley and the American occupation of California and the Pacific Northwest. Open to third- and fourth-year students who have a satisfactory knowledge of American History.

2 units, 1st semester (Robinson) [Not given in 1915-16.]

17b. History of the Far West.—A study of the growth and development of the Trans-Mississippi Region; its political reorganization and its influence upon national and international affairs. Open to students who have taken 17*a*.

2 units, 2d semester (Robinson) [Not given in 1915-16.]

18a. American and English Relations During the Civil War.—Use of British and American documentary material. Open to third-year students who have taken general courses in English and American history. The documents are selected by the instructor, and the course is intended to furnish training in the interpretation of documentary material.

3 units, 1st semester (Adams) MWF 11:15

18b. American and English Relations, since 1815.—Search for and selection of material on some assigned topic in diplomacy, with especial reference to the use of the United States documents and the British parliamentary papers.

3 units, 2d semester (ADAMS) MWF 11:15

19a. History of Brazil.—A somewhat detailed study of the History of Brazil up to the present time including a comparison of Brazilian political institutions with those of Spanish America and the United States. Open to those who have taken History 10 and to others with permission of the instructor.

2 or 3 units, 1st semester (VANN) MWF 11:15

19b. History of Mexico and California.—A somewhat detailed study of the History of Mexico up to the present time and the History of California up to 1848. Open to those who have taken History 10 and to others with permission of the instructor.

2 or 3 units, 2d semester (MARTIN) MWF 11:15

20. International Conciliation.—A course of lectures touching the effects of war and the possibility of substituting peaceful means of settling the differences of nations. Not open to first- and second-year students.

2 units, 2d semester (JORDAN, LUTZ) TTh 10:15

21. Tropical Colonization in the Far East.—A study of the present methods of the English, Dutch, French, and American peoples in managing tropical dependencies in the Far East. Open to students who have taken courses 9*a* and 9*b*.

2 units, 1st semester (TREAT) TTh 9:15

22. History of Australasia.—An account of British colonization in Australia and New Zealand to the present time. Open to third-year students who have a satisfactory knowledge of English history.

2 units, 2d semester (TREAT) [Not given in 1915-16.]

23. Governments of the Far East.—A study of the present governmental systems of China and Japan. Open to students who have taken course 9*b*.

2 units, 2d semester (TREAT) W 2:30

24. History of California.—A study of available materials. Independent investigation. Open to students who have taken 17*a*.

2 units, 2d semester (ROBINSON) [Not given in 1915-16.]

Advanced Courses

[Intended primarily for graduate students, but open to advanced undergraduates, with permission of their instructors.]

26. Seminary in Japanese History.—A study of the development of Japanese institutions, political, social, economic, and religious. Assignment of topic to each student and thesis required. Topic for 1915-16: Current political and economic questions.

2 units, both semesters (Ichihashi) By appointment

27. Mediaeval Institutions.—A practical study of select documents in the field of German constitutional history. Ability to read Latin and German is required.

2 units, both semesters (Show) By appointment

28. Seminary in the History of the West.

2 units, both semesters (Marshall) W 2:30

29. Seminary in English History.—Subject for 1915-16: English Seamen; Irish Home Rule; also other selected topics.

2 units, both semesters (Cannon) By appointment

30. Seminary in Latin American History.

2 units, 2d semester (Martin) By appointment

31. American Diplomatic History since 1815.—Open to students who have had course 18, and to others by special permission. Thesis required.

3 units, both semesters (Adams) TTh 3:30

32. Seminary in Modern European History.—Subject: History of Elections in Europe.

2 units, both semesters (Krehbiel) [Not given in 1915-16.]

33. Seminary in the History of American California.

2 units, both semesters (Robinson) [Not given in 1915-16.]

35. Seminary in American-European Relations in Nineteenth Century.—Assignment of topic to each student and thesis required.

2 units, both semesters (Adams) By appointment

36. American Diplomacy in the Far East.—Open to students who have had course 9*b*.

2 units, both semesters (Treat) M 2:30

ECONOMICS

AND POLITICAL SCIENCE

MURRAY SHIPLEY WILDMAN, ALBERT CONSER WHITAKER, Professors
WILLARD EUGENE HOTCHKISS, Acting Professor.
DONALD FREDERICK GRASS, STEPHEN IVAN MILLER, JR., VICTOR J. WEST, FREDERICK BENJAMIN GARVER, Assistant Professors.
WILFRED ELDRED, Instructor.
YAMATO ICHIHASHI, Lecturer.
MARGARET MULFORD LOTHROP, Assistant.

GRADUATION.—To obtain recommendation for the degree of Bachelor of Arts in Economics a student is expected to secure credit for a mimimum of 30 units in this department. Of these, 9 units should be in courses listed as advanced courses.

A minimum of 12 units in the department is a prerequisite to registration in any advanced course.

In addition to the work in this department majors in Economics are expected to secure credit for about 40 units of specified courses in other departments. These courses should be chosen in consultation with the department adviser, and the work completed during the first two years if possible.

TEACHER'S RECOMMENDATION.—To obtain a Teacher's recommendation in Economics the applicant must have completed five of the following courses: 1, 2, 3, 4, 5, 8, 9, 20, 21, 22, 36, 37, 57, 63.

JOURNALISM.—Students taking Economics as a major subject with the intention of preparing for journalism are referred to page 30.

Course 1 or 1*b* is a prerequisite to every other course in the department, except when otherwise specified in the description of the course.

ELEMENTARY AND GENERAL COURSES

1. Elements of Economics.—A general and introductory course. One lecture hour and two quiz hours each week. Majors of other departments, when juniors or seniors, may register for two units credit, omitting the lecture if necessary.

3 units, both semesters (WILDMAN, MILLER, GARVER, ELDRED) MWF 9:15

1b. Elements of Economics.—Covering the same ground as course 1 to accommodate students entering at mid-year. Not open for credit to those who have had credit in course 1.

5 units, 2d semester (WILDMAN) MTWThF 11:15

2. Elementary Accounting.—Development of accounting; theory of debit and credit; bookkeeping forms and practice; preparation of balance sheets and their interpretation; application of theory and principle to simple systems of accounts; practical accounting problems. Should be taken by students expecting to enter courses 20, 33, and 55.

3 units, 1st semester (GRASS) MWF 9:15

3. Resources and Trade of the United States.—A study of the resources on which American industries are based and those of foreign countries with which we have trade relations. Attention will also be given to problems of conservation and public control.

3 units, 1st semester (ELDRED) MWF 8:15

4. Money and Banking.—The elements of monetary theory; the laws of coinage, legal tender, and credit; the standard of value, price movements and their relation to prosperity; the banking systems of the United States and of California.

4 units, 1st semester (WILDMAN) TWThF 9:15

5. Elements of Railway Transportation.—This course will cover the main problems of railways in the light of economic principles, and their wider significance to industry and society; the present American railway system and its development; railway finance, theories of rates, and methods of public control.

3 units, 1st semester (MILLER) MWF 8:15

6. Introduction to Statistics.—A study of elementary statistical methods, and an examination of statistical data relating to selected social and economic problems. [Not given in 1915-16.]

7a. Economic History.—A study of selected periods in the economic and social history of England. [Not given in 1915-16.]

7b. Economic History.—A study of selected topics in the history of American industrial development. [Not given in 1915-16.]

8. Introduction to Political Science.—An introductory study of the origin and nature of the state, forms of government, theories of state functions, citizenship, and political parties. A general course open to all students. This course or its equivalent is prerequisite for all other political science courses.

2 units, 1st semester (WEST) TTh 8:15

9. State and Local Government.—Township, county, and state government in the United States, with special attention to California. Prerequisite, course 8.

2 units, 2d semester (WEST) TTh 8:15

10. Bond Values and Capitalization.—A problem course in the application of the rate of interest to the valuation of income-bearing property. Future sum and present worth; the rate of discount and rate of interest; simple and compound interest; the present worth of commercial paper; the capitalized value of annuities; the valuation of bonds and shares on the basis of a given rate of interest; the construction and use of bond value tables; accrued interest; the nature of depreciation; depreciation funds in theory and practice; sinking funds; the principles of capitalized value applied to mines, forests, industrial plants, franchises, inventions, etc. The student's work will consist largely in the solution of assigned problems. No advanced mathematics required, and majors of other departments will be admitted without prerequisites. This course is a prerequisite to 20, Corporation Finance, and 60, Valuation.

4 units, 1st semester (WHITAKER) MTWTh 10:15

11. Market Organization.—A study of the methods used in marketing the staple products; of the organized exchanges for cotton, wheat, and produce. Special attention will be given to the recent growth of co-operation.

3 units, 2d semester (ELDRED) MWF 8:15

INTERMEDIATE COURSES

20. Corporation Finance.—Elementary survey of corporation law; the organization and management of corporations; the corporation's securities, stocks and bonds and their classification; the stock market and stock speculation; capitalization, surplus, reserve, and financial policy; the provision of new capital; promotion, underwriting, receiverships and reorganization. Prerequisite, course 10.

4 units, 2d semester (WHITAKER) MTWTh 10:15

21. Public Finance.—A general course dealing with the principles involved in the conduct of government finances. The major part of the course is occupied with the subject of taxation, including the national, state, and local systems, but the subjects of public debts, public expenditures and the budget, and financial administration are also discussed.

3 units, 1st semester (GARVER) MWF 10:15

22. Labor Problems.—A study of the more important phases of trade unionism in England and the United States, including a history of the labor movement and a discussion of strikes, lockouts, boycotts, the blacklist, the closed shop policy, and allied questions.

3 units, 1st semester [Not given in 1915-16.]

23. Charities.—A general survey of the leading economic, social, and individual causes of poverty, and a study of the methods and principles of modern relief.

3 units, 1st semester (LOTHRFP) MWF 9:15

24. Corrections.—The causes of crime; proposed remedies; the treatment of the criminal; the prevention of crime; juvenile delinquency.

3 units, 2d semester (LOTHROP) MWF 9:15

25. Financial History of the United States.—A general historical survey of the financial policy of the national government with especial emphasis on the Revolutionary, Civil War, and recent periods. The subject matter of the course includes the tariff, the internal revenue system, the public land policy, the growth of public expenditures, management of the public debt, and treasury administration. Open to all students who have had or are taking Economics I.

2 units, 2d semester (GARVER) TTh 10:15

26. The Foreign Exchanges.—A study of the system of settling international indebtedness; principles and practice of exchange banking; money markets of the world and their relations. Domestic exchange will also be considered. Prerequisite, course 4.

4 units, 2d semester (WHITAKER) MTWTh 11:15

[Given in 1915-16 and in alternate years thereafter.]

27. Life Insurance.—General principles of insurance; their development and application to modern business; organization, forms, and technique of life insurance; industrial insurance; problems of state control. [Not given in 1915-16.]

28. Property Insurance.—Theory of risk and application to modern business; organization, forms, and technique of fire and marine insurance; miscellaneous forms of property insurance.

2 units, 1st semester (GRASS) TTh 9:15

29. Railway Rates and Regulation.—A more intensive study of rates in theory and practice; problems of freight classification and routing; distance and commodity tariffs; personal and local discriminations; the growth of state and federal regulation and a survey of important commission and court decisions. To be preceded by course 5.

3 units, 2d semester (MILLER) MWF 8:15

30. Water Transportation.—A study of the development and the significance of American and European internal waterways; ocean

transportation; the Panama Canal and the relation of water transportation to railways. Prerequisite, course 5.

2 units, 1st semester (Miller) TTh 10:15

31. Advanced Statistics.—A detailed study of some selected sources of statistical material, together with a discussion of methodology.

3 units, 2d semester [Not given in 1915-16.]

32. Commercial Policies.—A comparative and critical study of the commercial policies of the principal European nations. Special attention will be given to the growth of reciprocity in recent years and the present direction of commercial expansion.

3 units, 2d semester [Not given in 1915-16.]

33. Business Administration.—An introductory study of the growth and development of the business unit; the methods employed in modern industrial and commercial enterprises; the organization and correlation of departments; psychology of selling and buying; promotion of efficiency and co-operation in the personnel.

3 units, 2d semester (Grass) MWF 9:15

34. Comparative Federal Government.—An inquiry into the operation of the federal principle in the United States, Germany, and the British federated colonies—Canada, Australia, and South Africa. Prerequisite, course 8.

(West) [Not given in 1915-16. See courses 34*a* and 34*b*.]

34a. Comparative Administration in Europe.—A study of the governments of the principal European countries with particular emphasis on the actual work of government under different governmental systems. The relation of the executive to legislature. Organization of the executive. The central executive and local administration. Standards of governmental efficiency to be applied in different countries.

3 units, 1st semester (Hotchkiss) MWF 9:15

34b. Administration in the United States.—Conditions imposed by the American federal system. American compared with other federal systems. Position of the executive in the federal government as compared with state and city governments. The work of the executive as influenced by modern industry. The executive as affected by legislative practice. Administrative standards. Efficiency movements. Applicability of principles of business organization to government.

3 units, 2d semester (Hotchkiss) MWF 9:15

35. Parliamentary Government.—A study of the governments of England and France. Prerequisite, course 34.

(West) [Not given in 1915-16. See courses 34*a* and 34*b*.]

36. Municipal Government.—Analytic and comparative study of city government in Europe and America; relation of the city to the central government; organization of city government and special problems of administration.

3 units, 1st semester (WEST) MWF 10:15

37. Colonial Government.—The systems of government of colonies and dependencies employed by England, Germany, France, Holland, and the United States. Prerequisite, courses 34, 35.

[Not given in 1915-16.]

ADVANCED AND GRADUATE COURSES

50. American Methods of Taxation.—An intensive examination of some of the more important taxes levied by the national and state governments. A detailed and practical study will be made of income, corporation, railroad, bank, insurance, and land taxes. The organization and methods of the leading state tax commissions will also be considered. Prerequisites, courses 8 and 21.

3 units, 2d semester (GARVER) MWF 10:15

52. Banking Problems.—The organization of American credit institutions under the Federal Reserve Act, and a comparison between American and European practice. [Given in alternate years.]

2 units, 2d semester (WILDMAN) [Not given in 1915-16.]

53. Population.—The purpose of this course is threefold: (1) A historical survey of the phenomena of population in the leading countries, (2) an examination of theories of population, and (3) an attempt to determine the position of population as an economic factor.

3 units, 1st semester (ICHIHASHI) MWF 10:15

54. Immigration and the Race Problem.—A study of immigration as a phenomenon of population, and the social and economic significance of the ethnic composition as affected by it, with special reference to the United States.

3 units, 2d semester (ICHIHASHI) MWF 10:15

55. Advanced Accounting.—A study of more specialized systems of accounts; cost accounting; auditing; accounting problems. Prerequisites, Economics 2 and 33. [Given in alternate years.]

(GRASS) [Not given in 1915-16.]

56. Municipal Accounting.—Forms and practice of municipal accounts; preparation of the budget and reports; public utilities accounting. Prerequisite, Economics 2. [Given in alternate years.]

2 units, 2d semester (GRASS) TTh 9:15

57. Government in Its Relation to Industry.—A study of political problems as affected by the changes in business organization since the industrial revolution. The "laissez faire" *versus* the "general welfare" concept of government. Measures needed to make the general welfare concept effective.

2 units, both semesters (Hotchkiss) TTh 9:15

59. Combinations and Trusts.—The forms and methods of industrial pools and combinations or "trusts," and the problem of public control. The course deals largely with the Federal Anti-trust Legislation and its construction by the courts. [Given in alternate years.]

4 units, 1st semester (Whitaker) MTWTh 11:15

60. Valuation.—The valuation of the properties of public service companies for the purposes of the regulation of rates, with an introductory study of relevant parts of the theory of value and of interest. Prerequisite, course 10.

4 units, 1st semester (Whitaker) [Not given in 1915-16.]

61. Value and Distribution.—A study of the factors which determine the values of economic goods, and of those which determine the "shares in the distribution of wealth." Prerequisite, 12 units of economics and senior standing, or the permission of the instructor.

3 units, both semesters (Garver) MWF 8:15

62. Socialism.—A discussion of the history and fundamental principles of Socialism and allied movements. For seniors and graduates.

3 units, 2d semester [Not given in 1915-16.]

63a. History of Political Economy.—A brief survey of economic writers and literature of Europe down to 1850. The development of economic thought in its environment will be studied. A reading knowledge of French, German, or Italian is desirable.

2 units, 1st semester (Grass) TTh 11:15

63b. History of Economic Thought in the United States.—A brief survey of economic writers and literature of America, and a comparison with contemporary writers in Europe.

2 units, 2d semester (Grass) TTh 11:15

64. Political Parties.—Development of nominating machinery and political issues in the United States, analysis of party organization, consideration of party activities and reform movements, and inquiry into the true functions of parties.

3 units, 2d semester (West) MWF 8:15

65. American Politics.—An examination of the American system

with reference to the extent and effectiveness of popular control, special attention being given to the problems connected with elections and legislation.

(West) [Not given in 1915-16.]

66. Seminar in Taxation.—In 1915-16 the subject for investigation will be income taxes. Open only to seniors and graduate students who have had courses 21 and 50.

2 units, 1st semester (Garver) By arrangement

67. Seminar in Labor.—A research course devoted solely to a study of the labor movement on the Pacific Coast. Open only to graduates and seniors with 30 units in the department.

2 units, both semesters [Not given in 1915-16.]

68. Seminar in Administration.—Individual investigations and reports upon topics related to administration in the United States, especially topics dealing with movement to apply standards of business efficiency to government. Open to students who are taking or who have had the equivalent of course 34*b*.

2 or 3 units, both semesters (Hotchkiss) By arrangement

68a. Seminar in Comparative Government.—Topic for 1915-16: Organization of government in Russia. Open to students who have had courses 34 and 35 and to others by permission.

3 units, 1st semester (West) By arrangement

68b. Seminar in Municipal Problems.—Topic for 1915-16: Municipal charters in California. Open only to graduate students and to seniors with 30 units in the department, including course 36. Recommended: Law 10.

2 units, 2d semester (West) By arrangement

69. Seminar in Railroad Administration.—This seminar is designed for advanced students expecting to enter railway work as a vocation.

2 units, 2d semester (Miller) By arrangement

70. Graduate Seminar.—Open only to candidates for higher degrees and members of the department.

2 units, both semesters (Wildman) T 7:30-9:30

LAW

Frederic Campbell Woodward, Arthur Martin Cathcart, Charles Andrews Huston, Joseph Walter Bingham, Clarke Butler Whittier, Professors.
Marion Rice Kirkwood, Assistant Professor.
William Brownlee Owens, Instructor.
Samuel Watson Charles, Lecturer.

The Law School

The Law School was established, as a department of the University, in 1893. Its purpose is to provide a thorough legal education for students who are fitted by their maturity and their previous academic training to pursue professional study under university methods of instruction. The curriculum covers three academic years and constitutes an adequate preparation for the practice of law in any English speaking jurisdiction. Elective courses in Code Pleading and in California Practice are offered, and graduates of this school are admitted to the California Bar without examination. A comprehensive group of courses in Public Law, of value not only to the law student but to the student who contemplates entering the diplomatic, consular, or other government service, is a feature of the curriculum.

Only college graduates and students who have completed two years of work in the pre-legal curriculum of this University, or its equivalent, are admitted as regular students. Under certain conditions persons over twenty-three years of age who have had experience in business, or who evince uncommon ability, may be admitted as unclassified students, not candidates for a degree.

The Library

The Law Library contains over 20,000 volumes, including complete sets of the English, Irish, Scotch, and Canadian reports, the reports of all the Federal courts, a practically complete set of the reports of the American States and of the Canadian Provinces, the National Reporter system, the standard collections of cases (including the American Decisions, American Reports, American State Reports, Lawyers' Reports Annotated, and American and English Railway Cases), a valuable collection of statutes, text-books, encyclopedias, digests, and other books of reference, and sets of the leading American, British, and Continental legal periodicals.

The class of 1911, upon graduation, adopted a plan for the purchase,

from time to time, of works on Legal History. This collection is known as the "Class of 1911 Memorial Collection on Legal History."

Through the generosity of Justice McFarland, and his successor, Justice Melvin, the library has received, since 1907, a complete set of the records of the California Supreme Court and the District Courts of Appeal.

Admission to the Law School

Admission to the professional curriculum in law is granted to students duly enrolled in the University, as follows:

I. To students who have received the degree of Bachelor of Arts, or an equivalent degree, from this University or some other institution of recognized collegiate rank.

II. To students who have received credit for two years of work in the pre-legal curriculum offered by this University, or the substantial equivalent thereof in some other institution of recognized collegiate rank.

III. In the discretion of the Faculty of Law, to students over twenty-three years of age who cannot meet the foregoing requirements, but who have had experience in business or who evince uncommon ability. Such students are termed "unclassified," and are given a certificate in lieu of the degree conferred upon regular students.

Admission to the Bar

It is provided by Section 280*b* of the California Code of Civil Procedure, that any person producing evidence of having satisfactorily completed the three years' course of law study prescribed by this Law School, shall be entitled to a license to practice law in all the courts of the State, subject to the right of the chief justice of the Supreme Court to order an examination, as in ordinary cases of applicants without such evidence. The certificate required by the statute will be issued, upon request, to any regular or special student who shall have received an aggregate of 75 units of credit in the Law School, including credit in Pleading and California Practice and excluding credit in the course in Introduction to the Study of Law, and who, in addition thereto, shall have received credit in the course in English Composition (English 2).

Instruction in Practice

A special effort is made to impart to the student a thorough knowledge of the rules of procedure and practice, and to enable him to acquire a creditable degree of skill and facility in the application of such rules to conditions of actual litigation. To these ends, courses

are offered in Common Law and Code Pleading, and in California Practice. In the last-mentioned course particularly, the student is afforded practical experience in the commencement of actions, the preparation of pleadings, the trial of issues of fact, and the argument of questions of law.

Moot Court

A Moot Court, for the argument of questions of law, is conducted by Mr. Owens. Sessions are held twice a week throughout the first semester, and the work is open to second- and third-year law students.

Regulations

To receive credit in any course in the Law School, a student must obtain a minimum grade of fifty per cent in classroom work and also in the written examination held at the end of the course. His average for the two must reach sixty per cent. In estimating this average the final examination will count two-thirds and the classroom work one-third. The right to take the final examination is conditioned on regular attendance and the maintenance of the required grade for class work.

No student may register for more than fifteen hours of law per week. A student may register as visitor in any course in which he is entitled to register as a regular student, provided that such registration shall not give him more than fifteen hours of law.

Fees and Expenses

No tuition fee is charged by the University for culture or non-professional courses. Pre-legal students, therefore, are not required to pay tuition until they enter upon the study of law.

For professional law courses tuition fees are charged as follows: to students registering for thirteen or more units in law in any semester, $50 per semester; to students registering for less than thirteen units in law in any semester, $4 per unit per semester; but in the case of undergraduates who are taking law courses, the incidental fee, charged to all undergraduates, or such portion thereof as may be required, is applied in payment of the charge for tuition.

All undergraduate students in the University are charged an incidental fee of $15 per semester; but in the case of undergraduates who are taking law courses, the incidental fee, or such portion thereof as may be required, is applied in payment of the charge for tuition.

A small syllabus fee is charged in all law courses. It is generally 50 cents, but in a few courses, in which a considerable quantity of ma-

terial is mimeographed for the use of the students, it is higher. In the course in California Practice, where mimeographed material is used in place of a text- or case-book, the fee is $5. A diploma fee of $5 is payable before graduation.

All students are furthermore required to pay a hospital fee of $2 per semester. This entitles them to avail themselves of the hospital facilities of the Students' Guild at a rate of $1 per day.

The cost of living in the University dormitories, including board, room, light, and fuel, is $25 to $28 per month. In Palo Alto and College Terrace, rooms and board, in private houses, can be obtained at from $25 to $35 per month. Special commutation tickets are issued by the Southern Pacific Company, and students living in towns on the line of the railway, from San Francisco to San Jose, may easily go to and from the University daily.

The cost of text-books in the law courses will average $25 per year for the three years of the professional curriculum.

Order of the Coif

A chapter of the Order of the Coif, a national law school honor society, founded to encourage scholarship and to advance the ethical standard of the legal profession, was established in the law school in 1912. In the second semester of each year, such third-year law students as are deemed worthy of the distinction, selected from the ten per cent of the class ranking highest in scholarship, are elected to membership.

Pre-Legal Curriculum

For undergraduate students who enter with the intention of preparing for the study of law, a pre-legal curriculum is offered by the University under the direction of the Faculty of the Law School. This curriculum ordinarily occupies four years and requires that the student obtain 120 units of university credit. The equivalent of three years is given to general culture studies (for instruction in which no tuition is charged) and of one year to the professional study of law.

In electing courses in general culture subjects it is expected that 40 units will be applied as follows: To English Composition, 4; to a language or languages other than English, 12; to English and American History, or either, 9; to Economics, 6; to Mathematics and Logic, or either, 6 (six units of Physics or Chemistry, including laboratory work, may be substituted); to Introduction to the Study of Law, 3.

Students who satisfactorily complete the full pre-legal curriculum are granted the degree of Bachelor of Arts by the University, and by reason of having had one year of law study as undergraduates may

satisfy the requirements for the degree of Juris Doctor by two years of graduate law study.

Students who satisfactorily complete the first two years of the pre-legal curriculum, including the 40 units specified above, may enter the law school as candidates for the degree of Bachelor of Laws.

Law School Curriculum

The work of the first year in the Law School is prescribed. The work of the second and third years is elective, but the courses in Administrative Law, Private Corporations, Municipal Corporations, Evidence, and California Practice may not be taken, ordinarily, before the third year.

The courses offered in the Law School are as follows:

Preliminary Course

[Open to students of all departments who have 25 units of credit, and required of pre-legal students.]

1. **Introduction to the Study of Law.**—Nature, sources, and sanction of law; outline of the historical development of English and American courts and procedure; the content, classification, and determination of rules of law, including a consideration of legal rights and duties, the doctrine of *stare decisis* and the development of some of the more elementary rules of law by combining and comparing decisions; use of law books and the law library. Selected readings and cases.

3 units, 2d semester (Kirkwood) MWF 11:15

First-Year Courses

2. **Contracts.**—The formation of contracts: offer and acceptance; consideration; contracts under seal. Parties affected by contracts: contracts for the benefit of third persons; assignments; joint and several contracts. The Statute of Frauds. The performance of contracts: express and implied conditions; impossibility of performance. Illegal contracts. Discharge of contracts. Williston, Cases on Contracts, and selected California cases.

3 units, both semesters (Woodward) MWF 8:15

3. **Torts.**—Trespass to person, to real property, and to personal property; excuses for trespass; conversion; legal cause; negligence; contributory and imputed negligence; plaintiff's illegal conduct as a defense; duties of land-owners; hazardous occupations; liability for animals; deceit, defamation, slander, libel, privilege, malice; malicious prosecution, criminal and civil; interference with social and business relations, inducing breaches of duty, fair and unfair competition,

strikes, boycotts, business combinations. Ames and Smith, Cases on Torts.

5 units, 1st semester (CATHCART) MTWThF 9:15

4. Criminal Law.—Nature and sources of criminal law; crime as an act; attempts; criminal intent; circumstances affecting illegality of act; specific offenses; crimes against the person, larceny and allied offenses, crimes against the dwelling-house, conspiracy. Beale, Cases on Criminal Law (2d ed.).

4 units, 1st semester (OWENS) MTWF 10:15

5. Introduction to Property.—Distinction between real and personal property. Real property: tenures; estates, nature, kinds, creation and transfer; rights in another's land, natural rights, easements, covenants running with the land, public rights, franchises, rents. Gray, Cases on Property, Vol. II (2d ed.), and selected cases.

5 units, 2d semester (KIRKWOOD) MTWThF 9:15

6. Agency.—Nature of relation; appointment; liabilities of principal for agent's torts, contracts, crimes; liabilities of agent; parties to writings; undisclosed principal doctrines; delegation of agency; termination; ratification. Wambaugh, Cases on Agency.

4 units, 2d semester (HUSTON) MTThF 10:15

SECOND- AND THIRD-YEAR COURSES

7. Equity I: Contracts and Torts.—Historical development of equity; relation between equitable rights and powers and legal rights and powers; jurisdiction, procedure, and remedies of courts of equity; specific performance of contracts, with emphasis on the special trust relations between vendors and purchasers of realty; specific prevention and specific reparation of torts, including waste, trespass, nuisance, infringement of patents and copyrights, interference with business relations, violation of rights of privacy. Ames, Cases in Equity Jurisdiction, Vol. I.

4 units, 1st semester (KIRKWOOD) MTWTh 9:15

8. Constitutional Law.—Nature and sources of American constitutional law; adoption and amendment of constitutions; separation of powers; power of judiciary to declare acts of the legislative and executive branches of government unconstitutional; citizenship; privileges and immunities of citizenship; due process of law; police power; eminent domain; taxation; ex post facto and retroactive laws; laws impairing the obligation of contracts; regulation of commerce; money; war; government of territories. Open to second- and third-year law

students and to well-prepared fourth-year students in history, economics, and political science. Wambaugh, Cases on Constitutional Law.

4 units, 2d semester (CATHCART) MWF 9:15; Th 2:30

9. Administrative Law and Public Officers.—Administrative regulations; jurisdiction, discretion, adjudication; enforcement of orders; habeas corpus; mandamus; certiorari; equitable jurisdiction in public law. Freund, Cases on Administrative Law.

3 units, 1st semester (HUSTON) MWF 11:15

10. Municipal Corporations.—Nature; creation, alteration, and dissolution; internal organization; powers; liabilities on contract and for torts; remedies. Beale, Cases on Municipal Corporations, and selected California cases.

3 units, 2d semester (HUSTON) [To be given in 1916-17.]

11. International Law.—International Law defined and distinguished from Municipal Law. International relations in time of peace: definition, recognition and classification of states; effect of change of sovereignty; jurisdiction on land and on the high seas; nationality. International relations as modified by war: measures short of actual war; effects of war as between enemies; relations between belligerents and neutrals. Open to all law students and to advanced students in other departments. Scott, Cases on International Law.

3 units, 2d semester (WOODWARD) [To be given in 1916-17.]

12. Conflict of Laws.—The principles and rules of "private international law" determining the extent to which the domestic system of law adopts and applies provisions of foreign systems in cases involving extraterritorial factors; more especially (1) nature and effect of domicile and nationality; (2) jurisdiction of courts in proceedings *in personam,* proceedings *in rem,* and proceedings for *divorce;* (3) respective applicability and effect of domestic laws and foreign laws in relation to marriage and other domestic relations; contractual, quasi-contractual, delictual, and judgment obligations; the creation, transfer, taxation, devise, and inheritance of all forms of property interests. Beale, Shorter Selection of Cases on Conflict of Laws.

3 units, 2d semester (WOODWARD) TTh 9:15; W 1:30

13. Admiralty.—Admiralty jurisdiction, basis; maritime contracts, torts, and crimes; maritime liens, ex contractu, ex delicto, priorities, discharge; bottomry and respondentia obligations; salvage; general average. Ames, Cases on Admiralty.

2 units, 1st semester (KIRKWOOD) W 1:30; F 9:15

14. Roman Law.—A comparative study of some leading conceptions of the Roman Law, and its modern developments in the Civil Law of Continental Europe and America, with the related conceptions of the Anglo-American Common Law. Required reading.

3 units, 2d semester (HUSTON) M 2:30; TTh 8:15

15. Title to Land I: Possession and Landlord and Tenant.—Nature and importance of legal possession; remedies to recover legal possession wrongfully withheld; effect of statutes of limitations; tacking of periods of successive adverse possessions; actual occupation as element of title to legal possession; "constructive" adverse possession under color of title; intent as element of title to legal possession; possession through occupation of a servant or agent; possession through occupation of a tenant; relationship of landlord and tenant compared with rights and liberties of persons in various other relations; possession through a co-tenant's occupation; exceptions and interruptions to running of statutes of limitations. Creation of relationship of landlord and tenant; duration of tenant's interest; remedies of landlord for non-performance of tenant's obligations; remedies of tenant against landlord; convenants running with the land between landlord and tenant; rights, liberties, and duties of landlord and tenant with respect to third persons. Gray, Cases on Property (2d ed.), Vol. III; and selected cases and statutes.

3 units, 1st semester (BINGHAM) [To be given in 1916-17.]

16. Title to Land II: Conveyances.—Accretion; prescription; creation of interests in land by agreement or conveyance; methods of transfer of interests in land at common law and under statutes; execution of deeds; interpretation of instruments of conveyance; covenants for title; conditions; fraudulent conveyances; recording. Prerequisite, course 5. Gray, Cases on Property (2d ed.), Vols. III and VI; and selected cases and statutes.

3 units, 2d semester (BINGHAM) [To be given in 1916-17.]

17. Wills.—Acquisition of property on the death of former owner, escheat, descent, occupancy, gifts, *mortis causa*, the making, revocation, and republication of wills, ademption and lapse of legacies. Prerequisite, course 5. Gray, Cases on Property, Vol. IV (2d ed.), and selected cases.

3 units, 1st semester (BINGHAM) MWF 11:15

18. Future Interests.—Vested and executory interests; construction of language creating future interests; powers; rule against perpetuities; provisions for forfeiture and restraints on alienation. Pre-

requisite: courses 7 and 15. Gray, Cases on Property, Vol. V and part of Vol. VI (2d ed.), and selected cases and statutes.

4 units, 1st semester (Bingham) MWF 8.15 T 2.30

19. Water Rights and Irrigation Law.—A course in the intensive study of the law of water supply rights, with especial reference to water rights in the Western States. Selected cases and legislative enactments.

3 units, 2d semester (Bingham) MWF 10.15

20. Mining Law.—A course on mining rights under the Federal mining acts, with especial reference to mining rights in the Western States and Alaska. Costigan, Cases on Mining Law, and legislative enactments.

2 units, 2d semester (Bingham) [To be given in 1916-17.]

21. Persons and Domestic Relations.—Parent and child; custody, support, services, and earnings of child; relations as to torts; adoption. Infants; period of infancy; infants' contracts and conveyances; torts and crimes. Husband and wife; rights of husband as to wife's property; rights of each as to earnings, services, and society of the other; husband's interest in damages for tort to wife; husband's liability for torts or contracts of wife; husband's duty to support wife and wife's authority to bind husband by her contracts; married women's contracts, conveyances, and devises; estoppel of married women; liability of married women for torts and responsibility for crimes; contracts, conveyances, and suits between husband and wife; husband's right to custody of wife. Marriage; promise to marry and breach; marriage as a contract or relation; annulment; divorce; separation. Rules, Cases on Persons and Domestic Relations, and Vernier, Cases on Marriage and Divorce.

3 units, 2d semester (———) [To be given in 1916-17.]

22. Quasi-Contracts.—Origin and nature of quasi-contracts. Benefits conferred in misreliance on right or duty; general principles; misreliance resulting from mistake of law; misreliance on invalid contract, on contract unenforceable because of Statute of Frauds, on illegal contract, on contract impossible of performance, on contract unenforceable because of breach, on supposed requirement of valid contract, on non-contract obligation, on ownership of property. Benefits conferred through dutiful intervention in another's affairs. Benefits conferred under constraint; constraint of duress, of legal proceedings, of tax or assessment; Action for restitution as alterna-

tive remedy for breach of contract and for tort. Woodruff, Cases on Quasi-Contracts.

3 units, 1st semester (Woodward) M 1:30; TTh 8:15

23. Public Utilities.—The nature, rights, and duties of public service callings; railroads and canals; telephone and telegraph; gas, water, irrigation and other public utilities. Wyman, Cases on Public Service Companies (2d ed.).

2 units, 1st semester (Cathcart) TTh 11:15

24. Bailments and Carriers.—Bailments in general, including bailments for hire, for services to be performed, and for hired use. Special classes of bailments involving ordinary liability: pledges; warehousemen. Special classes of bailments involving exceptional liability: innkeepers; common carriers of goods; common carriers of passengers. McClain, Cases on Bailments and Carriers.

3 units, 2d semester (———) [To be given in 1916-17.]

25. Sales.—Subject matter of the contract; transfer of property and title; destruction of the goods and risk of loss; obligations of seller and buyer; rights of unpaid seller against the goods; remedies of the seller on the contract; remedies of the buyer on the contract; Statute of Frauds. Woodward, Cases on Sales.

4 units, 2d semester (Owens) MWF 9:15; Th 2:30

26. Bills and Notes.—Negotiability; form and inception, form of bill and of note, acceptance, delivery, consideration; negotiation, transfer, holder in due course; liability of parties, maker and acceptor, drawer and indorser, transferror; discharge; effect of the Negotiable Instruments Law and California statutes. Smith and Moore, Cases on Bills and Notes.

4 units, 2d semester (Kirkwood) [To be given in 1916-17.]

27. Partnership.—Nature of a partnership, its purposes, and members; creation of partnerships; nature of partner's interest; firm name and good will; mutual rights and duties of partners; actions between partners, at law and in equity; powers of partners; liability for acts of partners in contract and tort; general liability of partners; dissolution and notice; consequences of dissolution; dissolution agreements respecting debts; distribution of assets to creditors, and between partners; limited partnerships. Gilmore, Cases on Partnership.

3 units, 2d semester (Owens) M 1:30; Th 11:15

28. Private Corporations.—The nature of a corporation; the formation and organization of corporations; irregular incorporation; corporate powers; ultra vires; promoters; directors; shareholders;

creditors; stock issue and payment, transfer. Open to third-year law students only. Canfield and Wormser, Cases on Corporations, and selected California cases.

4 units, 1st semester (HUSTON) MTWTh 9:15

29. Insurance.—Marine, fire, and life insurance. Insurable interest in various kinds of policies; concealments; misrepresentations; warranties and other matters affecting the validity of the contract; amount of recovery; subrogation; waiver, estoppel, election; powers of agents; assignees and beneficiaries.

3 units, 2d semester (HUSTON) [To be given in 1916-17.]

30. Suretyship.—Personal suretyship compared with real suretyship (mortgages, pledges, liens, etc.); suretyship obligations compared with insurance and indemnity obligations; guaranty and other forms of suretyship in relation to the Statute of Frauds; suretyship in transactions involving negotiable instruments; fidelity contracts and judicial bonds; surety's defenses due to original defects in his obligation or to its subsequent discharge; surety's right to subrogation, indemnity, contribution, or exoneration; creditor's right to surety's securities. Ames, Cases on Suretyship.

3 units, 2d semester (WHITTIER) [To be given in 1916-17.]

31. Mortgages.—All forms of mortgage security, both real and chattel; essential elements of legal and equitable mortgages; legal and equitable rights, powers and remedies of mortgagor and mortgagee with respect to title, possession, rents and profits, waste, collateral agreements, foreclosure, redemption; priorities; marshaling; extension of mortgages; assignment of mortgages; discharge of mortgages. Kirchwey, Cases on Mortgage.

2 units, 2d semester (WHITTIER) TTh 10:15

32. Equity II: Trusts.—The Anglo-American system of uses and trusts. The creation, the transfer and the extinguishment of all forms of trust interests, express, resulting, and constructive; priorities between competing equities; the construction of trust dispositions; the special doctrines of charitable trusts. Ames, Cases on Trusts (2d ed.).

4 units, 2d semester (BINGHAM) MWF 8:15; T 2:30

33. Equity III: Interpleader, Bills of Peace, etc.—Special equitable remedies, including: interpleader; bills of peace and *quia timet;* cancellation of contract; clouds on title; perpetuation of testimony; rights of future enjoyment; reformation and rescission of contract for mistake. Ames, Cases in Equity Jurisdiction, Vol. II.

2 units, 1st semester (KIRKWOOD) [To be given in 1916-17.]

34. Damages.—Respective functions of court and jury in estimating damages; exemplary, liquidated, nominal, direct, and consequential damages; avoidable consequences; counsel fees; certainty, compensation, damages for non-pecuniary injuries; value; interest; and damages in certain actions of tort and contract. Beale, Cases on Damages (2d ed.).

2 units, 1st semester (CATHCART) [To be given in 1916-17.]

35. Bankruptcy.—Jurisdiction of the United States and the several States; who may be a bankrupt; who may be petitioning creditors; acts of bankruptcy; what property passes to the trustee; provable claims; duties and powers of the bankrupt and his trustee; protection, exemptions and discharge. Williston, Cases on Bankruptcy.

3 units, 1st semester (———) [To be given in 1916-17.]

36. Common Law Pleading.—The principal forms of action, including their scope and the necessary allegations and methods of pleading defenses in each; demurrers, general and special; traverses and pleas in confession and avoidance; dilatory pleas; amendments; motions based on the pleadings. Whittier, Cases on Common Law Pleading, and Ames, Cases on Pleading (2d ed.).

3 units, 1st semester (WHITTIER) MWTh 10:15

37. Code Pleading.—The civil action; parties; splitting and joining actions; the complaint, including the facts constituting the cause of action, the methods of stating them, and the prayer for relief; the answer, including general and specific denials, affirmative defenses and counterclaims; the demurrer; the reply; motions; bills of particulars; amendment and aider; construction of pleadings. Prerequisite: course 36. Sunderland, Cases on Code Pleading; also selected cases.

3 units, 2d semester (CATHCART) MWF 11:15

38. Evidence.—Judicial notice; presumptions and burden of proof; functions of court and jury; conjectural evidence; character evidence; hearsay and the exceptions to its exclusion; opinion; real evidence; writings, including authorship, proof of contents, "parol evidence rule" and construction; witnesses, including competency, privilege, examination, impeachment, and rehabilitation. Open to students having 31 units of credit in law. Thayer, Cases on Evidence (2d ed.).

2 units, 1st semester; 3 units, 2d semester (WHITTIER)
TF 10:15 (1st sem.); MWF 10:15 (2d sem.)

39. California Practice.—Organization and jurisdiction of courts; court records and files; proceedings prior to judgment, including: service and return of summons and motions relating thereto, appear-

ances, provisional remedies, such as attachment, arrest, etc., *lis pendens,* the trial, exceptions and findings, verdict; the judgment, its entry and satisfaction; proceedings subsequent to judgment, including: stay of execution, costs, execution, motion for new trial, appellate proceedings; probate and administration proceedings; special proceedings, including writs of certiorari, mandamus, and prohibition; introduction to jurisdiction and procedure of Federal courts. Prerequisite, course 37. Open to students having 31 units of credit in law. California Code of Civil Procedure; also selected California cases.

2 units, both semesters (CHARLES) TTh 1:30

40. Moot Court.—Argument of cases on submitted statements of facts; briefs; preparation of opinions.

2 units, 1st semester (OWENS) MW 2:30

SPECIAL LECTURES

In addition to the regular professional courses, a few special lectures, most of them of a practical character, are given each year by experienced lawyers of the California Bar.

COURSES IN OTHER DEPARTMENTS

Courses offered by other Departments of the University are open to pre-legal and law students. Of special interest and importance are the course in the Institutes of Justinian, in the Latin Department, the courses in Constitutional History, in the History Department, and various courses in Economics and Political Science.

SUMMER TERM

The primary purpose of the Summer Term is to enable law students, in this and other schools, to shorten materially the period of preparation for the bar, attendance at two summer terms making it possible to complete the three years' law curriculum in two and one-half calendar years. Incidentally, however, an opportunity to obtain systematic university instruction in law is afforded other persons of adequate training.

The Summer Term for the year 1915 opened Monday, June 21st, and continued for six weeks, closing Friday, July 30th.

The following courses were given:

9a. Administrative Law.—Course 9 in the regular curriculum, somewhat abridged.

2 units (HUSTON) MTWThF 10:00

13a. Admiralty.—Identical with course 13 in the regular curriculum.
2 units (KIRKWOOD) MTWThF 2:30

23a. Public Utilities.—Identical with course 23 in the regular curriculum.
2 units (CATHCART) MTWThF 9:00

29a. Insurance.—Course 29 in the regular curriculum, somewhat abridged.
2 units (HUSTON) MTWThF 12:00

33a. Equity.—Substantially identical with course 33 in the regular curriculum.
2 units (KIRKWOOD) MTWThF 8:00

34a. Damages.—Identical with course 34 in the regular curriculum.
2 units (CATHCART) MTWThF 11:00

The tuition fee for the summer term is twenty-five dollars. In addition there is a syllabus fee of fifty cents for each course. No other fees are charged.

MATHEMATICS

ROBERT EDGAR ALLARDICE, RUFUS LOT GREEN, HANS FREDERICK BLICHFELDT, Professors.
LAURA CORNELIA CLARK, RACHEL KING, Assistants.

The courses in this department have been arranged to meet the wants of two classes of students—students whose major subject is Mathematics, and students who, while taking their major in some other department, desire to include some mathematics in their course. Students in Engineering are provided for in the Department of Applied Mathematics.

For students whose major subject is Mathematics the following programme of work is recommended: In the first year, courses 3 and 4: in the second year, courses 9, and 10 or 21; in the third year, courses 11, 12, and 15; while the work during the fourth year and for graduate students may be selected from the remaining courses, and from the Department of Applied Mathematics. The advanced courses will, for the most part, be given once in two or once in three years, and it is hoped that the advanced students will thus have the opportunity of studying the more important branches of modern mathematics.

Students whose major subject is Mathematics are recommended to begin the study either of French or of German in their freshman year.

Students who desire to take one or more years of Mathematics as a part of a liberal training are recommended to begin their work in this Department with one or more of the courses 1, 2, 3, 6, and 7.

The Teacher's Recommendation.—For the High School Recommendation in Mathematics the following courses are required: 1, 2, 3, 4, 9, and 10 or 6.

1. Trigonometry.—Elementary course, with applications involving logarithmic calculation.

3 units, either semester (Green, Clark) MWF 9:15

2. Solid Geometry.—Elementary course.

2 units, either semester (Blichfeldt, Clark) TTh 9:15

3. Algebra.—Fundamental laws, degree, symmetry, indeterminate coefficients, remainder theorem, factors, introduction to theory of equations. Presupposes entrance credit in elementary algebra.

5 units, 1st semester (Green, King) MTWThF 8:15

4. Co-ordinate Geometry.—An elementary course in the analytic geometry of the conic sections. Presupposes course 3.

5 units, 2d semester (Green) MTWThF 8:15

[Students making Mathematics their major subject should take courses 3 and 4 as the first year's work, and those who have not had Trigonometry should also take course 1.]

5. Advanced Algebra.

2 units, 2d semester (Blichfeldt) TTh 10:15

6. Plane Geometry.—This course includes a rapid revision of elementary geometry, together with additional theorems and references to modern theories. It is recommended to those who expect to teach mathematics, and presupposes entrance credit in plane geometry.

2 units, both semesters (Allardice) TTh 10:15

7. General Course.—A brief and elementary survey of the principles of Algebra, Trigonometry, Co-ordinate Geometry, and Calculus. Presupposes elementary algebra and plane geometry.

3 units, both semesters (Blichfeldt) MWF 11:15

8. Teachers' Course in Algebra.

3 units, 2d semester (Green) [Not given in 1915-16.]

9. Differential and Integral Calculus.—Lectures on the Differential and Integral Calculus, with applications to the theory of plane curves, on the lines of Williamson's treatises.

3 units, both semesters (Allardice) MWF 9:15

10. Advanced Co-ordinate Geometry.—A continuation of course 4.
2 units, both semesters (GREEN) TTh 9:15

11. Advanced Calculus.—A continuation of course 9.
3 units, 1st semester (ALLARDICE) MWF 11:15

12. Theory of Functions.—Elementary course.
3 units, 2d semester (ALLARDICE) MWF 11:15

13. Non-Euclidean Geometry.—Presupposes a course in Calculus.
3 units, 2d semester (BLICHFELDT) MWF 10:15

14. Modern Co-ordinate Geometry.—Introductory course.
3 units, 1st semester (GREEN) MWF 10:15

15. Differential Equations.
3 units, 1st semester (BLICHFELDT) MWF 10:15

16. Definite Integrals.
2 units, 1st semester (ALLARDICE) [Not given in 1915-16.]

17. Advanced Theory of Functions.
4 units, both semesters (ALLARDICE) By arrangement

18. Theory of Equations.
3 units, both semesters (GREEN) [Not given in 1915-16.]

21. Projective Geometry.
2 units, both semesters (ALLARDICE) TTh 11:15

22. Classical Problems.
3 units, 2d semester (BLICHFELDT) [Not given in 1915-16.]

23. Mathematics of Investment and Insurance.
3 units, both semesters (GREEN) [Not given in 1915-16.]

25. Theory of Groups.
3 units, 1st semester (BLICHFELDT) [Not given in 1915-16.]

26. Higher Plane Curves.
3 units, both semesters (ALLARDICE) TTh 2:30

APPLIED MATHEMATICS

LEANDER MILLER HOSKINS, Professor.
HALCOTT CADWALADER MORENO, SIDNEY DEAN TOWNLEY, WILLIAM ALBERT MANNING, Associate Professors.
ERNEST WILLIAM PONZER, Assistant Professor.

The courses in Applied Mathematics are planned primarily to meet the needs of students in Engineering. The aim is to make these courses

practical in the sense of furnishing thorough drill on fundamental principles and much practice in their application. Emphasis is laid upon accuracy and system in the solution of numerical problems. Students whose training in arithmetical work has been deficient, or who are otherwise inadequately prepared, or who lack aptitude for mathematical study, can not pursue these courses successfully.

Students majoring in any Engineering department should have entrance credit in all preparatory subjects in mathematics, including Algebra (at least one and a half units), Plane and Solid Geometry, and Plane Trigonometry. This preparation is required for admission to any of the following courses.*

Course 1 embraces the regular first-year work, and courses 2 and 3 the regular second-year work for all students in Engineering. Those deficient in the work of the first year are not admitted to second-year courses. This requirement will be strictly enforced, whether the previous work has been taken in this University or elsewhere.

1. First-year Mathematics.—This course embraces (*a*) Algebra, (*b*) Trigonometry, (*c*) Co-ordinate Geometry. The work begins with a rapid review of elementary algebra, intended to test the student's familiarity with fundamental principles and operations, those showing deficient preparation not being permitted to continue. This review is followed by more advanced work in algebra, but emphasis is laid on the thorough mastery of the ordinary rules rather than on covering a large amount of ground. In the second part of the course much attention is paid to reviewing and enforcing the fundamental principles of plane trigonometry, and especially to the numerical solution of triangles using both natural and logarithmic functions. In co-ordinate geometry it is aimed to familiarize the student with the method of co-ordinates, so that he can apply it independently to simple problems, rather than to devote much attention to a detailed study of the properties of the conic sections or other curves. The course is open to students having entrance credit in Algebra (at least 1½ units), Plane and Solid Geometry, and Plane Trigonometry.

5 units, both semesters (Moreno, Manning, Ponzer)
MTWThF 8:15, 10:15

2. Calculus.—An elementary course on Differential and Integral Calculus, in which emphasis is laid on fundamental principles and simple applications.

3 units, both semesters (Hoskins, Moreno, Ponzer) MWF 9:15

*Courses in Solid Geometry and Trigonometry are given in the Department of Mathematics (courses 1 and 2).

3. Theoretical Mechanics.—An elementary course, covering the fundamental principles of Statics, Kinematics, and Kinetics, restricted mainly to coplanar forces and to plane motion of particles and of rigid bodies. An elementary treatment of Graphic Statics is included. The course is designed as preparation for the courses in Applied Mechanics taken by students of Engineering, but is open to all whose preparation includes the equivalent of course 1. Calculus must either precede this course or be taken at the same time.

5 units, both semesters (Hoskins, Manning, Townley) MTWThF 10:15

4. Advanced Calculus.—This course is designed to meet the needs of students who are preparing to pursue the more mathematical parts of engineering theory.

2 units, 1st semester (Moreno) [Not given in 1915-16.]

8. Engineering Mathematics.—A supplementary course designed to meet the needs of students of Electrical Engineering.

2 or 3 units, 1st semester (Moreno) TTh 9:15

9. Graduate Courses.—Advanced courses in Theoretical Mechanics, Hydromechanics, Theory of Heat, Theory of the Potential Function, Theory of Elasticity, or other subjects, may be arranged for students having the requisite mathematical training.

Astronomy and Geodesy

The course in Descriptive Astronomy is designed especially to meet the needs of students who have time for only a general knowledge of the subject. Course 11 is designed especially for students of Engineering and Geology who desire a working knowledge of practical astronomy. The other courses are intended for students of Applied Mathematics or Civil Engineering who wish to prepare themselves for geodetic work.

10. Descriptive Astronomy.—This course consists of a general survey of the various branches of astronomy, including a study of the celestial sphere, the bodies of the solar system, comets, the fixed stars, and other heavenly bodies. The treatment is non-mathematical.

3 units, 1st semester (Townley) MWF 11:15

11. Practical Astronomy.—The theory and practice of the determination of latitude, azimuth, time, and longitude, with sextant and engineer's transit. Intended especially to meet the requirements of students of civil engineering. Course 1, differential calculus, and surveying are prerequisites.

3 units, 2d semester (Townley) MWF 11:15

12. Advanced Practical Astronomy.—A continuation of course 11. Precise methods of determining time, latitude, etc., by means of the universal instrument.

Either semester, hours and credits to be adjusted (Townley)

13. Adjustment of Observations.—Theory of the method of least squares, with applications. Credit in course 2 or its equivalent is a prerequisite.

2 units, 2d semester (Townley) TTh 11:15

14. Geodesy.—Study of the form and dimensions of the earth and the practical methods of geodetic work. Courses 11 and 13 are prerequisites.

2 units, 2d semester (Townley)

PHYSICS

Fernando Sanford, Professor.
Frederick John Rogers, Associate Professor.
Elmer Reginald Drew, Joseph Grant Brown, Assistant Professors.
Perley Ason Ross, Instructor.
Cornelius Bol, Philo Fay Hammond, Edward Everett McCabe, Dayton L. Ulrey, Assistants.

[Courses 1, 2, 3, 4, and 5 constitute a course in General Physics, and are intended to precede the advanced courses.]

1. Dynamics.—Including hydrostatics and pneumatics. Open only to students who have had algebra and plane geometry. Required as a preparation for each of the courses following (except 6 and 7). Two lectures and two laboratory periods per week.

4 units, either semester (Ross)
Lec. TTh 9:15; Lab. WThF 1:30-4:30

2. Electricity and Magnetism.—Three laboratory periods per week, which will include two hours of lecture and discussion. Prerequisite: course 1, or an equivalent.

4 units, 1st semester (Drew) WThF 1:30-4:30

3. Heat.—One lecture and two laboratory periods per week. Prerequisite: course 1.

3 units, 2d semester (Ross) Lec. W 1:30; Lab. MT 1:30-4:30

4. Sound.—Including wave-motion. Three laboratory periods per week. Prerequisites: course 1, and trigonometry.

3 units, 1st semester (Brown) Lab. MTW 1:30-4:30

5. Elementary Optics.—Three laboratory periods per week. Prerequisites: course 1, and trigonometry.

3 units, 2d semester (BROWN) Lab. WThF 1:30-4:30

6. General Physics.—A course intended primarily for students in Engineering but open to others who have had equivalent preparation. Three experimental lectures and recitations and one laboratory period per week. Prerequisite: entrance Physics, and course 3 in Applied Mathematics, or may be taken concurrently with the latter.

a. Heat, Light, and Sound.

4 units, 1st semester (BROWN)
Lec. MWF 11:15; Lab. W or Th or F 1:30-4:30

b. Electricity and Magnetism.

4 units, 2d semester (ROGERS)
Lec. MWF 11:15; Lab. W or Th or F 1:30-4:30

7. General Physics.—A non-mathematical course intended primarily for students in Biological Science and students preparing for the study of Medicine, but open to others. Two lectures and two laboratory periods per week throughout the year.

4 units, both semesters (DREW)
Lec. MW 10:15; Lab. (I) MT 1:30-4:30 (primarily for premedical students), (II) TTh 9:15-12:15

8. Mechanical Measurements.—A course in exact measurements of mass, length, time, gravity, elasticity, surface tension, etc., using balance, dividing engine, cathetometer, chronograph, etc. Two laboratory periods per week. Prerequisite, course 1.

2 units, 2d semester (BROWN) Lab. MT 1:30-4:30

9. Electrical Measurements.—Open to students who have taken course 2 or course 6*b*. Students who have not taken or completed 6*b* are expected to register for more than two units.

2 or 4 units, 1st semester (ROGERS)
Lab. (I) TTh 9:15-12:15, (II) MT 1:30-4:30

9a. Photometry and Illumination.—Open to students who have completed course 9.

1 unit, 2d semester (ROGERS) By arrangement

10. Advanced Optics.—Two laboratory periods per week. Prerequisite, course 5.

2 units, 2d semester (SANFORD) Lab. ThF

11. Advanced Physics.—Lectures. Prerequisites, courses 1, 2, 3, 4, and 5, or their equivalent.

5 units, both semesters (SANFORD) [Not given in 1915-16.]

12. Analytic Mechanics.—Lectures. Prerequisites, course 1 and the Differential and Integral Calculus.

4 units, 2d semester (ROSS) By arrangement

13. Teachers' Course in Elementary Physics. — Prerequisites: courses 1, 2, 3, 4, and 5, or their equivalent.

1 unit, both semesters (SANFORD) W 10:15

14. Advanced Heat.—Lectures on selected topics, including the elements of Kinetic Theory and Thermodynamics. Prerequisites: courses 1 and 3, and calculus.

3 units, 2d semester (DREW) By arrangement

15. Vibratory Motion and Wave Motion.—Recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. Prerequisites: courses 1 and 12, or their equivalent, and calculus.

2 units, both semesters (ROGERS) TTh 8:15

16. The Literature of Physics.—A reading course open to students who have the preparation required for Physics 11. A general review of the literature of Physics, especially journal literature.

2 units, either semester (SANFORD) TTh 10:15

18. Advanced Electricity.—Recitations and lectures illustrated by occasional lecture experiments and a few carefully executed laboratory experiments. Prerequisites: courses 2 or 6*b*, 9, 12, and calculus.

3 units, both semesters (ROGERS) MWF 9:15

19. Investigation of Original Problems in the Laboratory.—Hours to be determined in each case.

(SANFORD) By arrangement

For graduation in the department the minimum requirement is 40 units of Physics and Chemistry, of which at least 30 units must be Physics. All elementary courses except 6 and 7 are suitable for Physics majors.

THE TEACHER'S RECOMMENDATION.—The minimum requirement is courses 1, 2, 3, 4, 5, or an equivalent, and course 13.

LABORATORY FEES.—Courses 1, 2, 3, 4, 5, 7, 8, and 10, $4 each per semester; course 6*a* and 6*b*, $3 each, per semester; course 9, $5 per semester; course 19, $2 per unit per semester.

CHEMISTRY

John Maxson Stillman, Lionel Remond Lenox, Edward Curtis Franklin, Stewart Woodford Young, Robert Eckles Swain, Professors.
John Pearce Mitchell, William Henry Sloan, Assistant Professors.
George Shambaugh Bohart, Alice Ruth Berger, Instructors.
William Edmund Burke, Acting Instructor.
[1]Fred Huestis Eldred, Howard McKee Elsey, Allen Edwin Stearn, George J. Ziser, Assistants.

I. Lecture Courses

1. General Inorganic Chemistry.—Comprising a systematic treatment of elementary principles and of the properties of the more important elements and their compounds. Open to all students. Those not having entrance credit in Chemistry will register in a three-hour section for the first semester and in laboratory course *a*1.

2 or 3 units, 1st semester; 2 units, 2d semester (Mitchell)
(I) MWF 8:15; (II) TTh 11:15

2. Principles of General and Inorganic Chemistry.—Discussion of the elements of chemical theories and of important generalizations in the field of inorganic chemistry. Open to all students who have completed courses 1 and *a*11.

3 units, both semesters (Stillman) MWF 11:15

3. Organic Chemistry.—Lectures and reviews on the chemistry of carbon compounds. Open to students who have completed courses 1 and *a*.

3 units, both semesters (Franklin) MWF 10:15

3a. A condensed course in organic chemistry is offered for students in medicine. [See Department of Medicine, Division of Chemistry, course 1.]

3 units, 2d semester (Swain) MWF 11:15

4. Industrial Chemistry.—Lectures on fuels, water, acid and alkali manufacturing, explosives, sugar-making and refining, petroleum. Open to students who have completed courses 2 and 3; or may be taken concurrently with course 3.

2 units, both semesters (Stillman) MF 9:15

5. History of Chemistry.—Open to students who have completed courses 2 and 3.

2 units, 1st semester, in alternate years (STILLMAN)
[Not given in 1915-16.]

6. Qualitative Analysis.—In connection with laboratory course *b*.

1 unit, either semester (LENOX) T 1:30

7. Advanced Organic Chemistry.—Advanced topics in organic chemistry, including stereochemistry. Open to students who have completed courses 2 and 3. [Given in alternate years.]

2 units, 1st semester (FRANKLIN) TTh 8:15

8. General Physical Chemistry.—Lectures covering as far as possible the whole field of physical chemistry. Open to students who have completed courses 2 and *d* in Chemistry, courses 3 and 9 in Mathematics, and course 1 in Physics (course 2 being also recommended.)

3 units, both semesters (YOUNG) MWF 8:15

9. Physical-Chemical Measurements.—An informal course of lectures given as needed in connection with course *f*.

No credit (YOUNG) By arrangement

10. Applied Physical Chemistry.—For students in Analytical Chemistry and Metallurgy.

2 units, 2d semester (YOUNG) MW 9:15

11. Physiological Chemistry.—Lectures on the chemical composition and action of the tissues and secretions of the animal body, the digestion of foods, and the elimination of waste products. Open to students who have completed course 3.

3 units, 1st semester (SWAIN) MWF 11:15

12. Seminary in Chemistry.—Discussion of assigned topics in theoretical and general chemistry. Open to graduate students, and to advanced undergraduates in Chemistry, with the approval of the Faculty in Chemistry.

1 unit, both semesters W 4

13. Chemical Calculations.—Consists of a series of problems designed to review the fundamental principles of analytical and theoretical chemistry. Open to juniors and seniors who have had courses 2 and *d*. A series of more advanced problems will be given by arrangement.

2 units, 2d semester (MITCHELL) TTh 8:15

II. Laboratory Courses

a. General Inorganic Chemistry.—In connection with course 1.

*a*1. Illustrating fundamental laws and principles of elementary chemistry, for students who have not received entrance credit in Chemistry.

2 units, 1st semester (Mitchell, Bohart) MT or ThF 1:30-4:30

*a*11. Inorganic preparations and general chemistry. For students who either have completed *a*1 or have received entrance credit in Chemistry.

2 units, either semester (Mitchell, Bohart) MT or ThF 1:30-4:30

b. Qualitative Analysis.—Open to students who have completed courses 1 and *a*11.

3 afternoons, either semester (Lenox, Berger) By arrangement

c. Preparation of Typical Carbon Compounds.—Open in connection with course 3 to students who have completed course *b*.

3 afternoons, either semester (Franklin) By arrangement

d. Quantitative Analysis.—Training in manipulation in gravimetric and volumetric methods. Work begins either semester. Students in other departments than Chemistry may register for three afternoons if they cannot arrange for four, as is recommended. Open to students who have completed courses 6 and *b*.

4 afternoons, either semester (Sloan) By arrangement

e. Mineral Analysis.—Systematic analysis of representative minerals. Open to students who have completed course *d*, and required of students whose major subject is Chemistry, unless *f* or *g* be elected instead.

4 afternoons, either semester (Lenox, Sloan) By arrangement

f. Physical-Chemical Measurements.—Exercises in the practice of physical-chemical laboratory methods. Open to students who have completed or are taking course 8, and who have completed course *d*.

3 or 5 units, either semester (Young) By arrangement

g. Physiological Chemistry.—A laboratory course including a preliminary study of the proteins, carbohydrates, and fats, and the action of the various digestive fluids upon them, followed by a chemical examination of the bile, blood, milk, the chief tissues of the animal body, and the excretions. In connection with course 11.

3 afternoons, 1st semester (Swain) By arrangement

h. Assaying.—Open to students who have completed course *d*.

3 afternoons, either semester (Lenox)
Lab. by arrangement; Lec. Th 1:30

i. Physical-Chemical Laboratory.—A course recommended in connection with Chemistry 10.

(Young) By arrangement

k. Analytical Chemistry.—A condensed course intended exclusively for students preparing for medicine. Not open to Chemistry majors, and not accepted in place of the regular courses in qualitative and quantitative analysis as prerequisites for advanced laboratory courses, with the exception of physiological chemistry for medical students.

[Students preparing for Medicine who have, however, already completed the regular course in Qualitative Analysis (6 and *b*), may register for *kb* for two hours credit.]

In 1915-16 the course *kb* must be begun by October 20th in the first semester and about March 1st in the second semester. The classes will be expected to finish *ka* by those dates. Course *k* (*a* and *b*) must be registered at the same time—for four units total credit. Either semester.

ka. Qualitative Analysis.—Brief course. Credit deferred until *kb* is also completed.

2 units (Lenox, Berger)

kb. Quantitative Analysis.—Brief course.

2 units (Sloan)

x. Advanced and Special Courses in laboratory work and research work are open to students who have completed the necessary prerequisites, by arrangement with professors of the Department, and with reference to the particular aims and ambitions of the students. Such advanced or special subjects are, for example: special methods in mineral analysis, iron and steel analysis; special methods in assaying; water analysis; food analysis; urine analysis; elementary organic analysis; special organic preparations; analysis of sugar, toxicology, etc.

Qualified students may also pursue investigations of problems in inorganic, organic, physical, analytical, or physiological chemistry under the direction of any professor with whom arrangement is made.

For all such advanced, special, or research work, students will register and enroll under *x*, giving name of the professor under whom the work is to be carried on, and for such number of units of credit as may be agreed upon.

Candidates for the degree of Bachelor of Arts in Chemistry may select any one of the four following curricula (A, B, C, D), the requirements of the Department being as follows:

A. General Chemistry

First Year:—Chemistry 1, *a;* Physics 1; Mathematics 3; German 1.
Second Year:—Chemistry 2, 6, *b*; Mathematics 7 or 9; German *2a* or *2c*.
Third and Fourth Years:—Chemistry *d*, 3, *c*, 8, *f*.

Recommended for all who are studying the science of chemistry for its own sake or for the profession of teaching.

B. Analytical Chemistry

First Year:—Chemistry 1, *a;* Physics 1; German 1.
Second Year:—Chemistry 2, 6, *b*; Geology 1, *1a*; German *2a* or *2c*.
Third and Fourth Years:—Chemistry *d*, *e*, *c*, *h*, 3, 10; Geology 5.

Particularly adapted to students who are looking forward to the career of analytical chemist and assayer.

C. Medical or Sanitary Chemistry

First Year:—Chemistry 1, *a;* Physiology 1; German 1.
Second Year:—Chemistry 2, 6, *b*; Physics 7; German *2a* or *2c*.
Third and Fourth Years:—Chemistry 3, *c*, *d*, 11, *g*.

Particularly adapted to students who are looking forward to medical education or to sanitary chemistry.

D. Chemical Engineering

This curriculum comprises four years of the necessary five years' work leading to the advanced degree of *Engineer* in Chemical Engineering. Candidates in this course receive the degree of A. B. in Chemistry upon completion of the following requirements:
First Year:—Chemistry 1, *a;* Applied Mathematics 1; German 1.
Second Year:—Chemistry 2, 6, *b*, *d;* Applied Mathematics 2, 3.
Third Year:—Chemistry 3, *c;* Engineering *1a*, *1b*, 2; Physics 1, 2 (or *6a* and *6b*); German *2a* or *2c*.
Fourth Year:—Chemistry 4, *e* (or *h*); Mechanical Engineering 11, 13; Metallurgy 9; Engineering *3a*.

Intended particularly for students who are working toward the degree of Chemical Engineer and who desire to fit themselves for positions of responsibility in connection with the administration of industries involving chemical knowledge and skill.

Advanced Degrees

Applicants for the degree of Master of Arts in Chemistry will be expected to complete, in addition to the requirements for the bachelor's degree, the equivalent of thirty units' work in the University—of which approximately two-thirds must be in the Department. This work will

include a thesis based on laboratory work, and Chemistry 8 and *f*, if not included in the undergraduate work.

Candidates for the advanced degree of ENGINEER in Chemical Engineering will be required to complete, in addition to the requirements for the A. B. degree specified under course D: Mechanical Engineering 14, 32, 24, 36, Chemistry 8, and a thesis based on laboratory work. Electrical Engineering 1 is advised, if possible, though not required. It is estimated that these requirements may be completed in one year after the completion of the requirements under Course D.

Candidates for the degree of DOCTOR OF PHILOSOPHY in Chemistry, after the completion of the equivalent of the requirements for Master of Arts or Engineer, will follow such courses as are approved by the Department faculty, subject to general University regulations.

The TEACHER'S RECOMMENDATION.—The minimum requirement for the high school teacher's recommendation in Chemistry is courses 1 and *a* (Elementary and General Inorganic, lectures and laboratory), the first half of course 2 (Principles of Chemistry), and either the second half of course 2, or courses 6 and *b* (Qualitative Analysis, lectures and laboratory).

LABORATORY FEES.—A charge of $25 per semester will be made to students in each laboratory course of not more than four units registration. Of this charge $5 per semester in assaying, and $10 per semester in the other courses, is returnable, less bills for breakage and loss of apparatus.

BOTANY

DOUGLAS HOUGHTON CAMPBELL, GEORGE JAMES PEIRCE, Professors.
LEROY ABRAMS, Associate Professor.
LEONAS LANCELOT BURLINGAME, Assistant Professor.
JAMES IRA WILLIAM MCMURPHY, Instructor.
RALPH ERNEST NODDIN, Assistant.

The Department of Botany aims to provide instruction for two classes of students: (*a*) Students who wish to know something of the structures, life processes, and relationships of plants, and to gain some familiarity with the methods of scientific work; and (*b*) Professional students who look forward to investigation, teaching, or the technical applications of Botany in Plant Breeding, Forestry, Agriculture, Horti-

culture, Plant Pathology, etc. Course 1, which presents the elements of the more important divisions of botanical study, is designed to meet the needs of both groups of students and must precede all other courses in the department, except in the case of students who have received entrance credit for its equivalent. Courses 2 to 12 are open to students who have had course 1 or its equivalent. It is the aim of these courses to give the student, by means of lectures and references to the literature, a general and summary account of the present state of knowledge, and in the laboratory and the field to afford him an opportunity for a personal acquaintance with plants themselves. Students who have had two or more years' work may, after consultation, be registered in courses 13, 14, 15, 16, 17. The resources of the department afford exceptional opportunity for investigation in a number of fields. Properly qualified students desiring to undertake such investigation should register in courses 20, 21, or 22, after consultation with the instructor concerned.

Major students in the department will be expected to complete 34 units in the department, and Zoology 1. The thirty-four units should include courses 1, 2 or 4, 3, 6, and 7 or 8. It is strongly recommended that courses 2 and 4 be taken in the second year.

The Teacher's Recommendation for High School Botany is based on a minimum of courses 1, 2 or 4, 6, and 7 or 8.

Students looking to Forestry or Agriculture as a profession should include courses 5, 6, 7, 8, 11, 12, and 16, as part of their preparation, and the following subjects in other departments: elementary physics, chemistry, geology and physiography, zoology, entomology, economics, and applied mathematics. They should also be able to read French and German.

Fees are charged in the various courses approximately sufficient to cover the cost of the perishable materials and syllabus used, as follows: Courses 1, 2, 4, 5, 6, 11, 15, $3.00 each; course 12, $1.00; courses 3, 7, 8, 9, 10, 13, 14, 16, 17, $5.00 each.

1. **Elementary Botany.**—Study of representatives of the principal groups of plants, with lectures upon their morphology and classification. Anatomy and physiology of seed plants. (Campbell's University Text-Book of Botany). Short botanical excursions will be made on five Saturdays in each semester. Attendance on these is not required, but is desirable, and will yield an additional half-unit per semester.

3 or 3½ units, both semesters (Campbell, Burlingame, Peircé, Abrams) Lec. W 1:30; Lab. MT or ThF 1:30

2. Algae.—Lectures, reading, and laboratory work upon the special morphology and classification of the Algae.

5 units, 1st semester (CAMPBELL)

Lec. W 2:30; Lab. MTThF 1:30-4:30

3. Fungi.—The laboratory work (three hours) will be devoted to morphology, development, and culture methods; the lectures to systematic relationship, with an account of economically important forms.

3 units, 1st semester (McMURPHY)

Lec. T 8:15; Lab. TTh forenoons

4. Archegoniatae.—Special morphology and classification of the Archegoniatae. Continuation of course 2.

5 units, 2d semester (CAMPBELL)

Lec. W 2:30; Lab. MTThF 1:30-4:30

5. Gymnosperms.—Studies in the morphology, classification, and distribution of the group. Particular attention will be paid to the Conifers.

3 units, 1st semester (BURLINGAME) [Not given in 1915-16.]

6. Angiosperms.—Lectures, laboratory, and field work on the morphology and classification of the Angiosperms. Open to students who have had course 1.

4 units, 2d semester (ABRAMS) Lec. W 1:30; Lab. MTW 1:30-4:30

7. Physiology.—Laboratory work, lectures, and reading on Nutrition. (An elementary knowledge of physics and chemistry is a desirable preliminary to this course.)

3 units, 1st semester (PEIRCE) Lec. W 2:30; Lab. MT 1:30-4:30

8. Physiology.—Laboratory work, lectures, and reading on Respiration, Growth, Irritability, and Reproduction. (An elementary knowledge of physics and chemistry is a desirable preliminary to this course.)

3 units, 2d semester (PEIRCE) Lec. W 2:30; Lab. MT 1:30-4:30

9. Botanical Technique.—Lectures and laboratory work. The methods of killing, fixing, preserving, embedding, sectioning, staining, etc., will be taught in connection with the preparation of material for study in the course.

3 units, 2d semester (BURLINGAME)

10. Plant Anatomy.—Lectures and laboratory work on the anatomy of vascular plants: special reference to the adaptation of structure to function, and to the evidence of evolution afforded by vascular anatomy.

3 units, 2d semester (BURLINGAME) [Not given in 1915-16.]

11. Geographical Distribution and Forest Botany.—Lectures, laboratory, and field work on the trees and shrubs, and the principles of geographical distribution which they illustrate. Open to students who have had course 1.

4 units, 1st semester (CAMPBELL, ABRAMS)
Lec. W 1:30; Lab. MTW 1:30-4:30

12. Field Botany.—Field work on the classification and distribution of the local flora. Open to students who have had course 1.

1 unit, both semesters (ABRAMS) [Not given in 1915-16.]

13. Cytology.—Lectures and laboratory work on the plant cell; the bearings of cytology on evolution, plant breeding, etc. (Open to those who have had course 1. Courses 7 and 8 are desirable preliminaries.)

3 units, 1st semester (BURLINGAME) [Not given in 1915-16.]

14. Archegoniatae.—Advanced work in special groups.

1st and 2d semesters (CAMPBELL) By arrangement

15. Taxonomy.—A critical study of some family or genus, or the flora of a region, with special reference to nomenclature and the methods of investigation. The laboratory and herbarium work will be supplemented by field work.

(ABRAMS) By arrangement, either semester

16. Plant Pathology.—Lectures, laboratory, and field work on the fungous and other plant diseases. Open only to students who have had course 3 or its equivalent.

3 units, 2d semester (MCMURPHY)
Lec. T 8:15; Lab. TTh forenoons

17. Advanced Plant Pathology.—Field and laboratory work on special diseases.

1st and 2d semesters (MCMURPHY) By arrangement

20. Research in Morphology.
(CAMPBELL, BURLINGAME)

21. Research in Physiology.
(PEIRCE)

22. Research in Taxonomy and Geographical Distribution.—Western America with its great diversity of climate and topography affords innumerable problems for investigation in taxonomy and plant distribution. The University collections, officially known as the Dudley Herbarium, are rich in material from this region and offer favorable facilities for the pursuit of studies along these lines. (ABRAMS)

PHYSIOLOGY AND HISTOLOGY

Oliver Peebles Jenkins, Frank Mace McFarland, Professors.
Clara S. Stoltenberg, Associate Professor.
James Rollin Slonaker, Frank Walter Weymouth, Assistant Professors.
[2]George Bevier, Acting Instructor.

Undergraduate Courses

1. General Anatomy and Physiology.—This course is designed to give a general view of the laws of the structure and the activity of organisms. The work will give occasion to discuss many questions of General Biology. It consists of: First, the study of the cell and its activities as shown in the unicellular organisms, in reproductive cells, and in individual cells of many tissues; second, the study of the laws and course of development resulting in higher differentiations in structure, and specializations in function, exhibited in a selected series of organisms, both animals and plants, of increasing complexity; third, the comparative study of the physiological processes of forms placed under widely different conditions. The latter part of the course is occupied with an introduction to the embryology, anatomy, and physiology of vertebrates. (One lecture and five laboratory hours per week.)

3 units, both semesters (Jenkins, Weymouth)
Lec. M 1:30; Lab. MT 1:30-4:30

2. Physiology of Muscle and Digestion.—To be preceded by courses 1 and 9 by majors in the Department. An experimental course covering the ground represented in Howell's Text-book on the same subjects. (Two lectures and five laboratory hours per week.)

4 units, 1st semester (Jenkins, Slonaker)
Lec. TTh 8:15; Lab. MT or ThF 1:30-4

3. Physiology of Blood and Circulation, Respiration, Elimination of Wastes, Metabolism, and Nutrition.—Planned to follow course 2. An experimental course, covering the ground represented in Howell's Text-book. (Two lectures and five laboratory hours per week.)

4 units, 2d semester (Jenkins, Slonaker)
Lec. TTh 8:15; Lab. MT or ThF 1:30-4

4. Anatomy and Histology of the Sense Organs.—Dissections, and study of prepared slides. Texts: Quain-Schäfer's Microscopic Anatomy, Quain's Sense Organs. One lecture and five laboratory hours

per week. Prerequisites for courses 4 and 5 are courses 1 and 9, for majors in the Department.

3 units, 1st semester (STOLTENBERG)
Lec. W 8:15; Lab. MW 8:15-12:15, or MT 1:30-4

4b. The Sympathetic System.—A course in the structure and function of the sympathetic system. Open to students who have had courses 2, 3, 4, 5 and 9.

2 units, both semesters (STOLTENBERG) By arrangement

5. The Nervous System.—A study of the structure of the central nervous system of man by means of dissections and prepared slides, supplemented by dissections of central nervous system of other mammals. Text required: Villiger's Brain and Spinal Cord; supplementary texts: Barker's Nervous System, Edinger's Nervöse Centralorgane, Johnston's Nervous System of Vertebrates, Quain's Neurology, Van Gehuchten's Système Nerveux. (One lecture and five laboratory hours per week.)

3 units, 2d semester (STOLTENBERG)
Lec. W 8:15; Lab. MW 8:15-12:15, or MT 1:30-4:30

6. Physiology of the Nervous System and Sense Organs.—An experimental course in these subjects, requiring courses 4 and 5 as preliminary. (One lecture and five laboratory hours per week.)

3 units, 2d semester (JENKINS, WEYMOUTH)
Lec. Th 1:30; Lab. ThF 1:30-4:30

8. Special Courses in Physiology.—Advanced courses open only to those who have had courses 1, 2, 3, 4, 5, and 6. They are arranged for the advanced study of selected subjects in physiology, or as a drill in the methods of research. The work will be planned for the individual student, the time varying with the exigencies of the case.

2 to 5 units, both semesters (JENKINS) By arrangement

9. Histology.—The study of the structure of the cell and its modes of reproduction, the epithelial, muscular, nervous, and connective tissues, and the outline of their development in a comparative way occupy the first semester. During the second semester the structure of the blood and lymph, and the microscopic anatomy of the organs are dealt with. Text required: Quain-Schäfer's Microscopic Anatomy. Elementary histological technique is taught during the course. In either semester a limited number of students may register for an extra unit, which is devoted to more extended histological technique. Pre-

requisite for course 9, course 1, or its equivalent. (One lecture and five laboratory hours per week.)

3 units, both semesters (McFarland)
Lec. Th 9:15; Lab. TTh 9:15-12:15

10. Histogenesis.—A course in advanced Histology for students who have completed courses 1 and 9, and in addition the first semester of Vertebrate Embryology (Zoology 11). It comprises the comparative study of the histogenesis of the fundamental vertebrate tissues and organs. (One lecture per week, minimum laboratory work six hours per week.)

3 units, 1st semester (McFarland) Lab. MTW 1:30-4:30

11. Neurocytology.—A comparative study of the minute structure of the nerve cell and nerve fibre, the neurone theory, and the question of functional alterations of structure during normal activity and artificial stimulation. (One lecture and at least six laboratory hours per week.) Open to advanced students.

3 to 5 units, 2d semester, in alternate years (McFarland)
MTW 1:30-4:30

12. Cellular Biology.—A course in Cytology dealing with the structure and functions of the cell, with special reference to the reproductive processes in unicellular and multicelluar organisms, and the theories connected therewith. Open to advanced students. (Two lectures per week, with demonstrations and laboratory work.)

3 to 5 units, 2d semester, in alternate years (McFarland)

13. Special Courses in Histology.—Advanced courses in Histology, Cytology, Microscopic Anatomy, and Microscopic Technique will be arranged for individual students, in accordance with their special needs. Open only to those who have had courses 1, 4, and 9.

2 to 5 units, both semesters (McFarland) By arrangement

14. Journal Club.—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology.

1 unit, both semesters (Department Faculty) By arrangement

15. Research in Physiology or Histology.

(Jenkins, McFarland, Slonaker, Stoltenberg, Weymouth)
By arrangement

Candidates for the Bachelor's degree who select Physiology and Histology as a major will be expected to take courses 1, 2, 3, 4, 5, 6, 9, and 14, and at least five units to be made up from the other courses offered in the Departments of Physiology, Anatomy, or Bacteriology; and in

addition courses 1 and *a* in Chemistry, one year in Physics (see course 7), and the first semester in Embryology (course 11 in Zoology). Candidates for the degree of M. D. will also include Organic Chemistry and courses in German or French sufficient to give a reading knowledge of the language.

Laboratory Unit of Credit.—In those courses in which definite laboratory time is not fixed, three hours of laboratory work per week through one semester are taken as the equivalent of one unit of credit.

The Teacher's Recommendation.—Students who wish the Department recommendation for High School teaching in Physiology are expected to complete courses 1, 2, 3, and 9.

Laboratory Fees.—$5 per semester for each laboratory course.

Graduate Courses

The graduate work of the Department is included in the courses 7, 8, 10, 11, 12, 13, 14, and 15. Undergraduate students may elect such of these courses as they are prepared to take, but credit recorded in undergraduate standing will not count toward a higher degree. The details of the work of a graduate student will be planned for each individual, and will naturally depend on the aim sought by him and upon his previous training. Candidates for the higher degrees will be expected to include in their work attendance on the Journal Club and Seminary, the selection of certain of the courses given above, and the accomplishment of some research. When it is desired to select a minor subject, the choice of such minor will be guided by the needs of the candidate. The work leading to these degrees is of such a nature as to require a reading knowledge of German and French for its accomplishment.

Preparation for the Study of Medicine

Students intending to enter on the study of Medicine are advised to take Physiology and Histology as a major subject, with Chemistry, Physics, and Anatomy among the collateral subjects. Such a curriculum gives that foundation both in scientific knowledge and in skill in experimental Physiology, and in Histological and Anatomical technique, which will make it possible to accomplish the medical course of the best medical schools with the greatest advantage. The courses required for graduation in the Department of Physiology and Histology with the degree of A. B. include the premedical requirements and the work of the first year of the Medical Department of this University. For details of requirements for students intending to register in the Department of Medicine see the announcement of that Department.

ANATOMY

Arthur William Meyer, Professor.
Edgar Davidson Congdon, Assistant Professor.

Required Courses

1. Osteology.—Students will be expected to familiarize themselves thoroughly, on their own initiative, with the surface anatomy of the bones of the skeleton. The laboratory work will be supplemented by recitations and lectures dealing with the internal architecture, the development, growth, and regeneration of typical bones, their nutrition and innervation, the mechanics of the skeleton as a whole, and the changes it undergoes from birth to old age.

2 to 3 units, 1st semester (Meyer, Congdon)

2-3-4. Dissection of (2) the Head, Neck, and Thorax; (3) the Upper Extremity; (4) the Abdomen and Lower Extremity.—These courses are given simultaneously throughout the year and may be begun at any time. No one will be assigned to less than one of the above parts nor will credit be given for less, save by special arrangement.

2 to 5 or more units (Meyer, Congdon)

Optional and Advanced Courses

5. Topographical Anatomy.—The work consists of laboratory study of frozen sections of the cadaver made in various planes, of dissected and specially injected preparations, supplemented by models and atlases. It is suggested that students who can afford the time supplement courses 2, 3, and 4 by the respective portions of course 7 immediately on completing the dissection of a part. Open to students who have completed courses 1, 2, 3, and 4.

1 to 5 units (Meyer)

6. Morphogenesis.—Factors influencing animal form and structure are considered. Especial attention is given to man and mammals. Lectures.

1 unit, 1st semester (Congdon) By arrangement

7. Human Embryology.—This course will be offered as soon as adequate provision can be made. Course 11 in the Department of Zoology is a prerequisite. Elective.

8. Investigation and Special Work.—The facilities of the laboratory are always at the disposal of properly qualified students or physicians

who desire to undertake the investigation of some problem in gross or microscopic anatomy or in embryology. Theses and special work must be arranged for individually, but may begin at any time.

Requirements for Advanced Degrees.—In addition to the requirements published in the University Register and the Announcement of the School of Medicine, students desiring to be admitted to candidacy for the degree of Master of Arts in Anatomy must have satisfactorily completed one year's work in histology and microscopic anatomy, at least one semester of embryology, and possess a knowledge of laboratory technique adequate for the investigation to be undertaken. For admission to candidacy for the degree of Doctor of Philosophy a reading knowledge of both French and German is further required.

Deposit Fees.—A deposit of $10, to cover damage to or loss of bones, is required of all students in Anatomy. This sum, less charges for damage or loss, is refunded at the close of the academic year, except in the case of students discontinuing Anatomy, who may obtain the refund at the end of the first semester. Students of Anatomy who are not registered medical students are charged a fee of $15 for each of courses 2, 3, and 4, and $5 for courses 1 and 5..

Embryology.—Development of the chick through the first three days of incubation. [Course 11 in the Department of Zoology.]

2 units, 1st semester (Price)

BACTERIOLOGY AND IMMUNITY

Wilfred Hamilton Manwaring, Professor.
Harry Johnson Sears, Instructor.

[With the co-operation of Dr. Marcus Claude Terry, United States Public Health Service, San Francisco; Dr. Harold F. Gray, Health Officer, Palo Alto; and Instructor James Ira Wilson McMurphy, Department of Botany.]

1. General Bacteriology.—An introductory course dealing mainly with non-pathogenic forms. Prerequisites: 75 units of university work, including 6 units of biological science, Chemistry 3 (or 3*a*), and *d* (or *k*).

5 units, 2d semester (Sears)
Lec. MW 9:15-10:15, Lab. TTh 9:15-12:15

1a. Bacteriological Chemistry.—Elective. Lectures supplementary to course 2.

1 unit, 1st semester (SEARS) F 3:30

2. Medical Bacteriology.—Required medical course. Prerequisites: 90 units of university work, including Physiology 2, 3, 9, Chemistry 3 (or 3*a*), *d* (or *h*), and course 1. The course must be preceded or accompanied by Chemistry 11 and *g*. (The course is open to third-semester medical students who have not had course 1.)

5 units, 1st semester (MANWARING, ———)
Lec. Lab. MT 8:15-11:15, Th 1:30-4:30

2a. Introduction to Immunity.—Lectures parallel with course 2.

1 unit, 1st semester (MANWARING) W 8:15

2b. Animal Inoculations, Autopsies, Surgical Technique.—Laboratory exercises parallel with course 2.

1 unit, 1st semester (MANWARING) F 1:30-3:30

3. Immunity.—Prerequisites: Chemistry 11, *g*, courses 2, *2a*, and *2b*.

7 units, 2d semester (MANWARING)
Lec. Lab. MTWTh 9:15-12:15

4. Milk, Water, and Food Analysis.—Standard bacteriological methods. Prerequisite, course 2.

5 units, 1st semester (SEARS) By arrangement

5. Seminary, Journal Club.—Prerequisites: course 2 and a reading knowledge of German.

1 unit, both semesters.

6. Advanced Work, Medical Thesis, Research.

FEES—Courses 1, 4, $10 each; courses 2, 3, 6, $15 each. Microscope rental, $3 per semester. Students pay for breakage and animals used.

MAJOR STUDENTS—*Required*: Physics 7; German 1, *2a*; Chemistry 3 (or 3*a*), *d* (or *k*), 11, *g*; Physiology 2, 3, 9; Bacteriology 1, 2, *2a*, *2b*, 3, and 5.

PHYSICAL TRAINING

ENCINA GYMNASIUM

HERBERT ROWELL STOLZ, Director.
WILFRED HARRY MALONEY, Instructor.
ERNEST BRANDSTEN, ERNESTO RAY KNOLLIN, JOHN HENRY WIGGINS, Assistants.

It is the aim of the Department of Physical Training to afford the opportunity for pleasurable and beneficial exercise for the men of the University. This opportunity is not limited to those who wish to obtain credit for systematic exercise but is open to all who pay the gymnasium fee. The maintenance of the gymnasium and the swimming pool is dependent upon the student fees administered by the director, and those who pay this fee should share in the responsibility of seeing that property which is kept up at their expense is not carelessly destroyed or damaged. On the other hand, thoughtful suggestions for the improvement of the gymnasium administration will always be welcomed and carefully considered.

LOCKERS.—Every man who has paid the gymnasium fee is entitled to a locker. A deposit of fifty cents is required on every key; this deposit is payable only at the Business Office. In the event of a key being lost a duplicate will be furnished at a cost of twenty-five cents. In case a key is mislaid or forgotten an assistant will open the locker with a pass-key but no duplicate key will be given out for temporary use.

TOWELS.—The payment of the gymnasium fee entitles the student to the use of towels. A ticket for the first towel may be obtained in the office and thereafter a used towel may be exchanged for a fresh one whenever the towel booths are open. Towels may only be obtained in person. In case the last towel is not returned the locker key deposit will not be refunded.

LIBRARY.—A library of books upon sport, hygiene, and physical training is maintained in the office and is available for the use of the men of the University. It is especially requested that the books be carefully handled and replaced upon the shelves. The books are not to be taken away from the library.

PHYSICAL TRAINING.—Beginning September, 1916, no university credit will be given for physical training. The aim will be to conduct

regular exercises for organized classes and corrective exercises for individuals and to stimulate widespread interest in all forms of athletics. With the help of the associated students provision will be made for adequate instruction for individuals as well as for the various athletic teams.

Enrollment.—Enrollment in physical training classes takes place from 9:00 a.m. till noon and from 2:00 p.m. till 6:00 p.m. on the Wednesday and Thursday following the first day of registration in each semester. The physical training is arranged upon a group system, each group containing one or more forms of exercise. The choice among these groups is only restricted by the student's inability to fit the prescribed exercise periods into his schedule of university work. Enrollment must be completed and a group finally selected within two weeks from the first day of each semester. Attendance will be recorded beginning with the first Thursday of each semester.

Absence.—All absences must be made up prior to the end-semester examinations unless such absences have been excused by the Director. In the case of illness or injury which does not prevent the student from attending classes he is expected to report at the gymnasium at the usual periods and to confer with the Director regarding the advisability of exercise. Following three consecutive absences without adequate excuse the absentee will be dropped from the class roll.

To permit occasional absences to be made up there will be a weekly make-up class. The time and manner of making up absences will be found posted upon the bulletin board in the gymnasium. At the beginning of each month the record of absences will be read to each class and will be posted upon the bulletin board.

Classes during Rainy Weather.—On rainy days all outside classes will report in the gymnasium unless otherwise instructed. Three exercise periods a week are required, regardless of the weather.

Regulation Gymnasium Suit.—Those who are enrolled in physical training for credit are expected to report for exercise in the regulation gymnasium suit which consists of white sleeveless cotton shirt; unbleached canvas running pants with belt straps; grey stockings; white gymnasium shoes.

Swimming Pool Regulations.—The swimming pool has been constructed by the Board of Control for the Associated Students; the Board of Trustees has contributed toward the cost of the purification plant. The cost of equipment, maintenance, and instruction is met by the gymnasium fees.

Every man who has paid his student body dues is entitled to use the

pool under the conditions decided upon by the Executive Committee of the Associated Students and the Director of Physical Training.

For the maintenance of a healthy pool it is absolutely necessary that all the men using it take a personal interest in its cleanliness. Any man who enters the pool while suffering from an infectious disease is endangering the health of all the users. Every man is expected to take a shower bath before entering the pool.

Swimming Pool Schedule.—On week days the pool is reserved for class instruction as follows: 11:30 a.m. to 12 noon; 2:00 p.m. to 3:00 p.m.; 4:00 p.m. to 5:30 p.m.; at other hours during the week and from 9:00 a.m. until 5:00 p.m. on Saturday the pool is open to the members of the student body.

Medical Advice.—As a part of his registration every student is required to keep the appointment which is given him for a medical examination. The object of this examination is to ascertain the general health of each man and to afford a basis for advice concerning exercise and study.

The medical adviser does not undertake the treatment of disease but he stands ready at any time to help in the case of accident or minor injury and to advise with students concerning their health.

Special classes and individual instruction are given to those who require corrective exercises and who will cooperate in the work.

Physical Training Groups

1. Boxing, indoor soccer, basketball. (Maloney)	MTWThF†	10:15
2. Boxing, soccer, indoor baseball. (Maloney)	"	11:15
3. Swimming, apparatus. (Brandsten)	"	11:15
4. Elementary swimming. (Brandsten)	"	2:00
5. Advanced swimming. (Brandsten)	"	4:00
6. Boxing, wrestling, basketball. (Wiggins)	MWF	5:00
7. Dancing, tumbling, apparatus. (Knollin)	MWF	5:00
8. Boxing, wrestling, basketball. (Wiggins)	TThF	5:00
9. Fencing. (Maloney)	TWF	5:00
10. Rugby football. (Stolz)	MTWThF†	5:00
11. Soccer football. (Maloney)	"	5:00
12. Track athletics. (Stolz)	" 11:15,	5:00
13. Baseball.	"	5:00
14. Rowing.	"	5:00
15. Tennis.	"	
16. Corrective exercises. (Stolz)	By arrangement	

†Three exercise periods a week required.

During the basketball season those who desire to try for the various teams may do so, returning to their regular group at the end of the basketball season.

ROBLE GYMNASIUM

Clelia Duel Mosher, Assistant Professor and Director.
Florence Cotten Burrell, Etta L. Paris, Instructors.
Inezetta Holt, Assistant.

The aim of Roble Gymnasium, as a laboratory of personal hygiene, is to improve the standard of physical health of the women and to increase their mental and physical efficiency.

No credit will be given for gymnasium work beginning September, 1916. The aim will be to conduct regular exercises for organized classes, corrective work for individuals, and to stimulate widespread interest in all forms of athletics, with provision for adequate instruction for individuals as well as for the various teams.

1. Physical Training and Personal Hygiene.—Three hours per week in the gymnasium or its open air divisions. Open to all women students. Registration may be repeated each semester, but the student must show steady progress toward her highest physical efficiency. The Stanford regulation gymnasium suit is required. All work is under the close supervision of the Medical Director.

First Year—Gymnastics, Folk and Gymnastic Dancing, Elementary Sports.

Second, Third, and Fourth Years—Gymnastics, Folk and Gymnastic Dancing, Sports or Fencing.

1 unit, each semester (Mosher, Burrell, Paris, Odenheimer)

(1st year Gymnastics) MWF 10:15, 11:15; (Elementary Gymnastic and Folk Dancing) TThF 10:15; (Advanced Gymnastic and Folk Dancing) TThF 11:15; (Elementary Sports) MTWTh 11:15, MWF 3:30; (2d, 3d, and 4th year Advanced Sports) MTWThF 4:30; (Advanced Gymnastics) MWF 4:30; (Intermediate Gymnastic and Folk Dancing) MWF 4:30; (Elementary Fencing) MWF 11:15; (Advanced Fencing) TThF 10:15.

2. Personal Hygiene.—Two lectures per week. Open to all women students. Required of all women taking courses 3 to 6.

2 units, 2d semester (Mosher) TTh 10:15

3. Physical Training Theory.—Open only to students who have had Elementary and Advanced Gymnastics, Personal Hygiene 2, Zoology 10, or Anatomy.

2 units, 1st semester (PARIS) TTh 3:30

4. Practice Teaching.—Two hours per week. Open to students who have had course 3.

1 unit, 2d semester (PARIS) TTh 3:30

5. The Theory and Teaching of Athletic Plays and Games.—Open only to students who have had one or more years of Physical Training 1, and Personal Hygiene 2.

2 hours, 2d semester (BURRELL) By arrangement

6. Supervision of Children's Play.—Three hours per week. Open only to students taking course 5.

1 unit, each semester (BURRELL)

Women who purpose attending later a School of Physical Training as preparation for being directors of Physical Training or supervisors of playground work should take the subjects listed below in addition to the courses offered in this department. Such students will find it advantageous to major in Zoology; if other majors are desired students are requested to consult the Director.

ZOOLOGY.—1. Elementary. (3 units, both semesters)
3. The Vertebrates (Field Work). (2 units, both semesters)
7. Microscopical Anatomy. (2 units, first semester)
11. Embryology. (2 units, both semesters)
ANATOMY.—1. Osteology. (2 or 3 units, 1st semester)
2, 3, 4. Dissections of (2) Head, Neck, Thorax, (3) the Upper Extremity, (4) Lower Extremity and Abdomen. (2 to 5 units or more)
7. Topographical Anatomy.
PHYSIOLOGY.—2. Muscle and Digestion. (4 units, 1st semester)
3. Blood and Circulation, Respiration, Elimination of Wastes, Metabolism, and Nutrition. (4 units, 2d semester)
PSYCHOLOGY.—Either course 1 or course *a*.
1. Elementary Psychology. (4 units, 1st semester)
1*a*. Mental Hygiene. (2 units, 1st semester)
BOTANY.—12. Field Botany. (1 unit, both semesters)
ENTOMOLOGY.—1. Elementary. (3 units, either semester)
ENGLISH.—Vocal Expression. (3 units, either semester)
ECONOMICS.—1. Elements. (3 units, both semesters)
MECHANICAL ENGINEERING.—5. Woodworking.
(2 exercises a week, one semester)

ZOOLOGY

CHARLES HENRY GILBERT, †HAROLD HEATH, GEORGE CLINTON PRICE, Professors.
JOHN OTTERBEIN SNYDER, Associate Professor.
EDWIN CHAPIN STARKS, WALTER KENRICK FISHER, Assistant Professors.

[Courses 1, 2, 3, and 4 may be undertaken without previous preparation in Zoology.]

1. Elementary Zoology.—A laboratory course involving the study of representatives of the principal groups of animals, accompanied by lectures on their structure and classification, and on the general laws of biology which they illustrate.

3 units, both semesters (PRICE, STARKS)
Lec. M 1:30; Lab. MT 1:30-4:30

2. Animal Forms.—An introduction to the facts and principles of animal biology; structure, function, and interrelations of animal forms; the simpler and best established generalizations in zoological theory.

3 units, 2d semester (FISHER)
Lec. by arrangement; Lab. ThF 1:30-4:30

3. Animal Life.—A consideration of the general principles of biology based on a study of the behavior, environment, structure, and relationships of the simpler fresh-water organisms. This course will be useful to students who intend to teach where marine material is not available.

2 units, 1st semester (FISHER)
Lec. by arrangement; Lab. MT 1:30-4:30

4. The Vertebrates.—A general course in the classification of vertebrate animals, with studies in their habits and the geographical distribution of species. The course will include field excursions and a study of the methods of collecting and preserving specimens.

2 units, both semesters (SNYDER) Lec. Th 2:30; Lab. ThF 1:30-4:30

5. The Invertebrates.—This course, following course 1 or 2, is designed to give the student a broader knowledge of the morphology and relationships of the more important invertebrate groups.

3 units, both semesters (FISHER)
Lec. by arrangement; Lab. MT 1:30-4:30

†Absent on leave, 1915-16.

6. Invertebrate Embryology.—A study of segmentation, the formation of the germ layers, and certain phases of the later development, including the significance of larval forms and the relationships of the principal phyla. Must be preceded by courses 1 or 2, and 5.

2 units, both semesters (beginning 2d semester) (HEATH)
[Not given in 1915-16.]

7. Advanced Work on Invertebrates.—The original investigation of problems connected with the anatomy and embryology of invertebrates.

3 to 5 units, both semesters (HEATH) [Not given in 1915-16.]

8. Microscopical Anatomy.—A study of the fundamental animal tissues, with drill in microscopical technique.

2 units, 1st semester (HEATH) [Not given in 1915-16.]

9. Special Systematic Work on Invertebrates.—Original investigation of problems connected with the classification of invertebrates.

2 or 3 units, both semesters (FISHER) By arrangement

10. Comparative Anatomy of the Vertebrates.—A detailed examination of vertebrate morphology, including dissection of representatives of the several classes of vertebrates, with comparative studies in vertebrate osteology, the nervous and circulatory systems.

3 units, both semesters (SNYDER) Lab. MTW 1:30-4:30

11. Vertebrate Embryology.—First semester: development of the chick through the first three days of incubation. Second semester: the early stages in the development of the salamander and the later stages in the development of the mammal.

2 units, both semesters (PRICE, FISHER)
Lec. Th 1:30; Lab. ThF 1:30-4:30

12. Primitive Chordates.—Amphioxus, the tunicates, and the lampreys.

3 units, 1st semester (GILBERT) Morning hours, by arrangement

13. Fishes.—An examination of the larger groups of fishes and practical work in the discrimination of species.

3 units, 2d semester (GILBERT) Morning hours, by arrangement

14. Advanced Ichthyology.—Special problems in the morphology and classification of fishes will be set for advanced students prepared for such work.

2 to 5 units, both semesters (GILBERT) By arrangement

15. Comparative Osteology of the Lower Vertebrates.—A course for advanced students in the osteology and relationships of the lower

vertebrates, to be arranged either as a general course, or as an intensive study of a few related forms.

2 or 3 units, both semesters (STARKS) By arrangement

16. Journal Club.—Open to seniors and graduate students.

2 units, both semesters (GILBERT) By arrangement

Major students must before graduation complete courses 1, 4, 5, 8, 10, 12, 13, 16, the first semester of courses 6 and 11, one advanced course in Zoology, and course 1 in Botany.

Work for graduate and special students will be laid out in accordance with their individual needs and preferences.

Students who look forward to the study of medicine may take Zoology for their major subject and receive the A. B. degree at the close of a four years' course which shall also contain the first year in medicine. The following courses in Zoology will be required of such students: Zoology 1, 6 units; The Invertebrates, 6 units; Comparative Anatomy, 6 units; Embryology, 4 units; Journal Club, 4 units.

The TEACHER'S RECOMMENDATION.—The Department recommendation for High School teaching in Zoology requires the completion of the following subjects: Elementary Zoology, 6 units; the Invertebrates, 6 units; the Vertebrates, 4 units; Comparative Anatomy of the Vertebrates, 6 units.

THE ZOOLOGICAL COLLECTIONS

The ZOOLOGICAL MUSEUM contains a very full representation of the fishes of North America, and includes among others a valuable series of the deep-water fishes of the Pacific, and large collections from the West Indies, the Hawaiian Islands, Bering Sea, Japan, the coasts of Mexico and Central America, and the Galapagos Islands. The museum contains also a large representation of the reptiles, batrachians, birds, and mammals of California and adjoining States. The collection of marine invertebrates is rich in Pacific echinoderms and crustacea, and contains a good working nucleus in the other principal groups. The series of deep-sea forms is especially valuable.

LABORATORY FEES.—All laboratory courses, $3 each per semester.

ENTOMOLOGY AND BIONOMICS

†Vernon Lyman Kellogg, Professor.
Mary Isabel McCracken, Rennie Wilbur Doane, Assistant Professors.
Laura Florence, Kearn Babcock Brown, Assistants.
David Starr Jordan, Lecturer.

ENTOMOLOGY

1. Elementary Entomology.—The elementary study of insect structure, development, and classification, including practice in collecting and preserving specimens. A preparatory study of the subject of entomology.

3 units, either semester (McCracken)
Lec. M 9:15; Lab. MWF any forenoon hours, 1st semester
By arrangement, 2d semester

2. Morphology and Physiology of Insects.—A study of the metamorphosis, comparative morphology, and special physiology of insects.

3 units, either semester (McCracken)
Lec. WF 9:15; Lab. MWF forenoon hours
By arrangement, 2d semester

3. The Honey-bee and Apiculture.—A study of the structure and habits of the honey-bee, and of the methods of bee-keeping.

2 units, 2d semester (McCracken) Hours by arrangement

4. Economic Entomology: Coccidae (the Scale Insects).—A study of the classification, general biology, and economic relations of the scale insects, with particular attention to the more important injurious ones of the Pacific Coast. Field, laboratory, and bibliographic work, with occasional lectures. Must be preceded by courses 1 and 2.

2 or 3 units, either semester (Doane)
Any three afternoons, 1:30-4:30

5. Economic Entomology: Forest Insects.—A study of the insect enemies of forest and shade trees. The course includes field, laboratory, and bibliographic work. Should be preceded by course 4.

3 units, 1st semester (Doane) MWF 1:30-4:30

6. Economic Entomology: Orchard and Garden Insects.—A study of the principal injurious and beneficial insects of the orchard and

†Absent on leave, first semester, 1915-16.

garden. Includes field, laboratory, and bibliographic work, and a weekly lecture on the history, principles, and practice of economic entomology. Should be preceded by course 4.

3 units, 2d semester (DOANE) MWF 1:30-4:30

7. Economic Entomology: Advanced Work.—Studies of one or more groups of insects of economic importance, including systematic ecological investigations, and methods of controlling the injurious species. Field, laboratory, and library work, with occasional lectures. Intended for students fitting themselves for practical work in Economic Entomology. Open to advanced students by arrangement.

3 to 5 units, both semesters (DOANE)

8. Insects and Disease.—A discussion of the insects that cause or disseminate some of the diseases in man and the domestic animals. Lectures and demonstrations. Open to students having some previous training in biology.

2 units, 2d semester (DOANE) Lec. TTh 9:15

9. Classification of Insects.—A study of the classification of insects, and the literature of systematic entomology. Field and laboratory work.

4 units, either semester (MCCRACKEN) By arrangement

10. General Entomology and Insect Adaptations.—A course of lectures and demonstrations. Open to students who have had some work in biology.

2 units, 1st semester (KELLOGG, MCCRACKEN) Lec. TTh 9:15

11. Insect Histology and Histologic Technic.—The study of the histology of insect tissues and organs, and the special methods of such study.

2 or 3 units, 1st semester (KELLOGG, MCCRACKEN)
Hours by arrangement

12. Advanced Work.—Advanced study and investigation of the biology of insects. Laboratory and field work.

2 to 5 units, both semesters (KELLOGG, MCCRACKEN)
By arrangement

BIONOMICS

13. Organic Evolution.—Lectures on the laws or principles of biology and the factors in organic evolution. Not open to first- and second-year students.

2 units, 2d semester (JORDAN, KELLOGG) MFW 10:15

14. Heredity.—A discussion of the modern knowledge of heredity

with special reference to human inheritance. Not open to first- and second-year students.

2 units, 2d semester (Kellogg) TTh 10:15

Work for graduate and special students will be specially arranged.

Major students in Entomology must obtain before graduation thirty units of credit in Entomology, and credit for course 1 in Zoology, and course 1 in Botany.

The Entomological Collections contain authoritatively determined specimens, accessible for comparison, in all of the insect orders, and include many sets of specimens illustrating the development and habits of insects. There is included, also, the most important existing collection of North American Mallophaga, comprising the types of four-fifths of all the species so far described from North America and the Pacific Islands, an unusually large collection of Coccidae (scale insects), and valuable series of specimens from the Galapagos Islands, Samoa, and the Philippine Islands.

Laboratory Fees.—$3 per semester for each laboratory course. A returnable deposit of $2.50 for microscope lenses and locker is required.

GEOLOGY AND MINING

Geology and Paleontology

Bailey Willis (Geology), James Perrin Smith (Paleontology), Professors.

Austin Flint Rogers (Mineralogy), Cyrus Fisher Tolman, Jr., (Economic Geology), Associate Professors.

Mining and Metallurgy

David Morril Folsom (Mining), Galen Howell Clevenger (Metallurgy), Associate Professors.

Valentine Richard Garfias (Petroleum Technology), Hayes Wilson Young (Metallurgy), Instructors.

Students intending to pursue their major subject in the Department of Geology and Mining should offer as a part of their entrance preparation, solid geometry, trigonometry, advanced algebra, physics, and chemistry; otherwise the mathematics, physics, and chemistry must be taken in the University.

Courses of study in the Department of Geology and Mining lead to the degree of Bachelor of Arts on completing four years of study, or

the equivalent of one hundred and twenty units of credit. The degree of Engineer is given in Mining or Metallurgy on completion of an additional year, or the equivalent of thirty additional units of credit, including a thesis. The degree of Master of Arts may be secured at the close of the fifth year's work, including a thesis, in accordance with the regulations of the University (p. 82). The degree of Doctor of Philosophy is given on completion of the required additional work under the conditions stated on p. 84. The requirement that the work shall be done in residence may in part be waived on recommendation of the department when the needs of original investigation cannot be met at the University.

Courses of Study

The following is a list of the studies offered in the department. They are grouped under the heads of Geology, Economic Geology, Mineralogy, Paleontology, Mining and Metallurgy. Certain elementary courses in the department are required of all students, as indicated: Geography 1, or Geology 1; Geology 2, 3, 5, 6 (the last two are waived for Metallurgy); Economic Geology 1, 2, 3; Mineralogy, 1, 2 and 3, or 1 and 3; Paleontology 2. Other courses are elective, and should be selected only after conference with the instructors. At least forty units of work in the department will be required for the degree of Bachelor of Arts.

GEOLOGY

Geography 1: Physical Geography.—A lecture course on the aspects of the earth, treating of the facts, causes, and laws of physical geography; intended to give the student a knowledge of the physical world as the abode of man. Given in alternate years in lieu of Geology 1; required of all majors in Geology and Mining, unless they have had Geology 1; open to students from any other department.

3 units, 1st semester (1916-17) (Willis) MWF 8:15

Geology 1: Elementary Geology.—A lecture course on elementary geology, comprising a discussion of the phenomena and processes of geologic changes and an outline of geologic history; given in alternate years in place of Geography 1. Designed to constitute an introduction to all other courses in the department, and required of all majors who have not had Geography 1; open to students from any other department.

3 units, 1st semester (1917-18) (Willis) MWF 8:15

2. Supplement.—A seminar course, consisting of lectures, reading,

thesis, and discussions on physical geography or elementary geology, in alternate years; designed to supplement Geology 1 or Geography 1, whichever is given in the same year, in order that the students who are majors in the department may be prepared in the elements of geography and geology to go on to the succeeding courses; required of all majors in the department; open to students of other departments only by special arrangement.

1 unit, 1st semester (1916-17) (Willis) F 9:15

3. Field Excursions.—Elementary practice in geological observation as illustrated by the local facts of the geology within reach from the University. Required of Geology and Mining majors and open only to them, except by special arrangement.

2 units, 1st semester (Willis, Tolman) Saturday forenoons

4. Structural Geology.—Advanced work in the structure of stratified, massive, and foliated rocks. Open only to students who have had Geology 1 to 3 inclusive and Mineralogy 1.

2 units, 2d semester (Willis) TTh 9:15

5. Field Geology.—Field practice in working out geology in the field and its representation upon topographic maps and sections. Prerequisites: Geology 1, 2, 3, 4, Mineralogy 1, and Civil Engineering 4*a*. Students not majoring in the department may omit Geology 3 and 4.

5 units, summer vacation (Willis, Tolman)

6. Topographic Geology.—Field and laboratory work, with the construction of geologic maps and sections. Open to students who have completed course 5 in Geology.

4 units, summer vacation (Willis, Tolman)

7. Regional Geology.—Lectures and reading, with discussions in seminar, on the geologic provinces of North America and other continents.

(Willis) By arrangement

8. Advanced Geology.—Reading and research work for advanced students in geology.

(Willis) By arrangement

MINERALOGY

Mineralogy 1: Common Minerals and Rocks.—The study of the more common minerals and prominent rock types. An elementary course with emphasis upon sight determination and simple physical

and chemical properties. Introductory to the other courses in mineralogy and petrography. Open to students who have had Chemistry 1 and *a*. Required of all Geology and Mining students, and open to a limited number of other students in order of application.

3 units, 2d semester (ROGERS, HAWLEY)
Lec. TTh 11:15; Lab. T 1:30-4:30

2. Crystallography.—An elementary study of the geometrical and optical properties of crystals. This course is intended primarily as a prerequisite for course 3, but may also be taken independently by chemistry and physics students as an introduction to the study of the solid state.

3 units, 1st semester (ROGERS)
Lec. TTh 11:15; Lab. T 1:30-4:30

3. Mineralogy.—Systematic study of the important minerals and their determination by all available methods. Mineralogy 1 and 2 (Crystallography) and Chemistry 6 and *b* are prerequisites.

3 units, 2d semester (ROGERS)
Lec. W 11:15; Lab. WF 1:30-4:30

4. Petrography.—Study of hand specimens and thin sections of the principal rock types and mineral deposits. In course 3 the properties or characters of minerals are considered, while course 4 is primarily concerned with the relations between associated minerals with special reference to their occurrence and origin. Preparation and study of polished ore sections will be under the direction of Professor TOLMAN. Mineralogy 2 and 3 are prerequisites.

5 units, 1st semester (ROGERS)
Lec. WF 11:15; Lab. WF and one period by arrangement, 1:30-4:30

5. Advanced Mineralogy.—Advanced work in crystallography, mineralogy, or petrography may be undertaken by properly prepared students.

2 to 5 units, either semester (ROGERS) By appointment

ECONOMIC GEOLOGY

Economic Geology 1: Mineral Resources.—A lecture course on the mineral resources of the world, their distribution, mode of occurrence and utilization; designed as an introduction to economic geology; required of all students majoring in the department, and open to students from any other department; should be preceded by Geography

1 or Geology 1 and (for majors in the department) by Geology 2, but any student will be accepted on recommendation of his major professor.

2 units, second semester (Willis) TTh 8:15

2. Non-metals.—The occurrence, distribution, origin, and geologic methods of investigation of the non-metallic substances. Prerequisite, Mineralogy 1.

3 units, 1st semester (Tolman) MWF 8:15

3. Ores.—The ore-forming processes, modes of occurrence of the various types of ore bodies, and the structures of the ores. The geologic study of the metallization of the important mineral-bearing provinces of the world and especially of the United States, and the description of the important ore deposits typical of each province. Open to students who have completed or are taking Mineralogy 1.

3 units, 2d semester (Tolman) MWF 8:15

4. Seminar in Ore Deposits.—A review of the literature of ore deposits and the bearing of the data collected upon the problems of ore deposits. Prerequisite, Mineralogy 4. (For seniors and graduate students.)

3 units, 2d semester (Tolman) By arrangement

5. Special Courses.—These include: (*a*) a study of the literature of some special phase of economic geology, with a thesis; (*b*) field investigations of some mine or mineral district, or the general economic geology of an assigned area; (*c*) microscopic studies of ores collected during field studies, or microscopic investigation of suites of specimens owned by the University. (For graduate students; in exceptional cases seniors will be admitted.)

(Tolman) By arrangement

PALEONTOLOGY

Paleontology 1: Systematic Paleontology.—History and character of fossils. Three lectures and six hours of laboratory work weekly.

4 units, 1st semester (Smith) MWF 11:15

2. Historical Geology.—History and character of geologic formations. Three lectures and six hours' laboratory work weekly.

4 units, 2d semester (Smith) MWF 11:15

3. Systematic Conchology.—Special studies in Tertiary and Recent Conchology of the West Coast. One lecture and two afternoons of laboratory work weekly.

2 units, both semesters (Smith) TTh 1:30-4:30

4. Stratigraphic History of the Great Basin.
2 units, 1st semester (SMITH) TTh 10:15

5. Stratigraphy and Geologic History of California.
2 units, 2d semester (SMITH) TTh 10:15

6. Advanced Paleontology.—Original investigation of various problems in paleontology, especially of invertebrate morphology, and of the distribution of faunas. This course will consist entirely of private work, in field and laboratory. Open to advanced students and graduates.
2 to 5 units, both semesters (SMITH) By arrangement

MINING

Mining 1: Mining Excavation.—Lectures and assigned reading on explosives and drills, and on methods of earth, rock, and ore excavation, including shaft sinking and tunneling. Prerequisites: Geology 1, Mineralogy 1.
2 units, 1st semester (FOLSOM) TTh 10:15

2. Ore Dressing.—Crushing and concentrating machinery and methods.
2 units, 2d semester (FOLSOM) TTh 8:15

3. Mining Methods.—Prospecting, development, and mining methods. Prerequisites: Economic Geology 2 and 3; Mining 1.
*2 to 3 units, 1st semester (FOLSOM) MW 8:15

4. Mining Machinery.—Lectures and assigned reading on the development and adaptation of power for mining purposes. Air compressors, pumps, hoists, and ventilating machinery. Mechanical handling of ore. Prerequisite for Mining students, Applied Mathematics 3.
*2 to 3 units, 2d semester (FOLSOM) MW 8:15

5. Petroleum Technology.—A general survey of the various problems involved in the exploitation of oil deposits.
3 units, 1st semester (GARFIAS) MWF 9:15

6. Petroleum Technology.—Detailed work on typical problems related to the various branches of petroleum engineering. Prerequisite, Mining 5. Students from other departments may register by permission of the instructor.
2 to 3 units, 2d semester (GARFIAS) By arrangement

*Students in Geology and Mining will register for three units in Mining 3 and 4. Students from other departments will register for two units.

7. Mine Engineering.—Lectures and assigned reading on general engineering and economic problems in connection with mining operations.

2 to 5 units, either semester (Folsom) By arrangement

8. Summer Mining.—Students will be given credit for two months' systematic work in the mining districts, or in the oil fields, under conditions satisfactory to the department.

4 units

METALLURGY

LECTURE COURSES

Metallurgy 1: Metallurgy of Constructive Materials.—Lectures upon the manufacture and properties of iron and steel and, to a less extent, the other alloys used in engineering. Open to students who have completed Chemistry 1.

2 units, 1st semester (Clevenger) TTh 8:15

2. Hydro-Metallurgy of Gold and Silver.—Lectures upon the general principles of hydro-metallurgical practice, with particular reference to the cyanide process. The older and now obsolete processes of chlorination, hyposulphite lixiviation, patio, pan amalgamation, etc., are referred to very briefly. Open to students who have completed Chemistry 1. Prerequisite of laboratory course *b*.

2 units, 1st semester (Clevenger) TTh 9:15

3. General Metallurgy.—Lectures upon the general principles of metallurgy, the fundamental chemical reactions, fuels, refractory materials, pyrometry, and alloys. The minor metals are dealt with briefly in this course. Open to students who have completed Chemistry 1.

3 units, 1st semester (Young) MWF 10:15

4. Metallurgy of Lead.—Lectures upon lead smelting, refining of base bullion, the pyrometallurgy of gold and silver insofar as it is inseparable from that of lead, parting and electrolytic refining of Doré bullion. Open to students who have completed Chemistry 1 and Metallurgy 3.

2 units, 2d semester (Young) ThF 10:15

5. Metallurgy of Copper.—Lectures upon the smelting of copper ores, converting, electrolytic refining, and a brief discussion of the hydrometallurgy of copper. Open to students who have completed Chemistry 1 and Metallurgy 3.

2 units, 2d semester (Clevenger) TW 10:15

LABORATORY COURSES

a. General Metallurgy.—Laboratory work on the standardization and use of various types of pyrometers, and the metallographic study of a limited number of metals and alloys.

2 units, 2d semester (YOUNG) TF 1:30

b. Metallurgy of Gold and Silver.—This course involves the investigation and the making of a report upon the possible treatment of a gold or silver ore by the cyanide process. Open to students who have completed Chemistry *d* and *h* and Metallurgy 2.

3 to 5 units, 2d semester (YOUNG) MTWThF 1:30

c. Flotation.—This course involves the investigation and the making of a report upon the possible treatment of an ore by flotation. Open to students who have completed Chemistry *d* and *h* and Mining 2.

3 to 5 units, 1st semester (CLEVENGER, YOUNG) MTWThF

d. Metallurgical Research.—Properly qualified students may take up any subject of metallurgical investigation in the laboratory and, under proper restrictions, certain investigations may be carried on in the field. Also work in bibliography.

2 to 8 units, either semester (CLEVENGER) 1:30, by arrangement

CURRICULA

List of studies recommended for students proposing to graduate from the Department of Geology and Mining, after a four years' course, with the degree of A. B. A student may propose to specialize in geology, mineralogy, economic geology, paleontology, mining, or metallurgy, and should select the studies indicated by the † in the corresponding column. The arrangement of courses by years indicates the order in which they should be taken, but does not imply that any course must be taken in a certain year.

During the fifth year candidates for the degree of A. M. or Engineer of Mines or Metallurgy will pursue such courses as may be required to fill out any omissions of previons years, or such as may be recommended by the instructor in the particular branch of professional work.

COURSES OF STUDY RECOMMENDED TO GRADUATE IN GEOLOGY, MINERALOGY, ECONOMIC GEOLOGY, PALEONTOLOGY, MINING, OR METALLURGY.

		STUDIES	Geology	Mineralogy	Economic Geol.	Paleontology	Mining	Metallurgy
FIRST YEAR	First Sem.	Geology 1 or Geography 1	+	+	+	+	+	+
		Geology 2	+	+	+	+	+	+
		English 2	+	+	+	+	+	+
		Engineering 1*a* & 1*b*	+	+	+	+	+	+
		Chemistry 1	+	+	+	+	+	+
		Applied Mathematics 1	+	+	+	+	+	+
	Sec. Sem.	Economic Geology 1	+	+	+	+	+	+
		Physics 1	+	+	+	+	+	+
		Applied Mathematics 1	+	+	+	+	+	+
		Chemistry 1 & *a*	+	+	+	+	+	+
		English 2	+	+	+	+	+	+
SECOND YEAR	First Semester	Geology 3	+	+	+	+	+	+
		Paleontology 1	+			+		
		Chemistry 6 & *b*	+	+	+	+	+	+
		Applied Mathematics 2					+	
		" " 3					+	
		Metallurgy 1			+		+	+
		" 2			+		+	+
		French 1 or German 1	+	+	+	+		
	Second Semester	Paleontology 2	+	+	+	+		
		Chemistry *d*	+	+	+		+	+
		Mineralogy 1	+	+	+	+	+	+
		Applied Mathematics 2					+	
		" " 3					+	
		English 23	+	+	+	+	+	+
		French 1 or German 1	+	+	+	+		
		Mechanical Engineering 11					+	+
THIRD YEAR	First Semester	Economic Geology 2	+	+	+		+	
		Paleontology 3				+		
		" 4	+		+	+		
		Mineralogy 2	+	+	+	+		+
		Civil Engineering 4*a*	+	+	+	+	+	+
		Engineering 2					+	
		Mining 1			+		+	+
		" 3					+	+
		Metallurgy 3					+	+
		Chemistry 2		+	+			+
		French 1 or German 1	+	+	+	+		+
		Spanish 1	+		+		+	

	STUDIES	Geology	Mineralogy	Economic Geol.	Paleontology	Mining	Metallurgy
THIRD YEAR — SECOND SEMESTER	Economic Geology 3	+	+	+		+	+
	Geology 4	+	+	+	+	+	
	Mining 2					+	+
	Paleontology 5	+			+		
	Mineralogy 3	+	+	+	+		
	Metallurgy 4					+	+
	" 5					+	+
	Chemistry *h*					+	+
	" 2		+	+			+
	" 10						+
	Geology 5 & 6	+	+	+	+	+	
	French 1 or German 1	+	+	+	+		+
	Spanish 1	+		+		+	
FOURTH YEAR — FIRST SEMESTER	Geology 7	+		+	+		
	Geology 8	+					
	Paleontology 6				+		
	Mineralogy 4	+	+	+	+		
	Economic Geology 5		+	+			
	Mining 3					+	
	" 5					+	
	" 7					+	
	Metallurgy *a*, *b*, or *c*					+	+
	" *d*						+
	Chemistry 8		+	+			
	" *e*		+				
	Mechanical Engineering 24						+
	" " 1*a*						+
FOURTH YEAR — SECOND SEMESTER	Geology 7	+		+			
	" 8	+					
	Paleontology 6				+		
	Mineralogy 5		+				
	Economic Geology 4		+	+			
	" " 5		+	+			
	Mining 4					+	+
	" 6						
	" 7					+	
	Metallurgy *a*, *b*, or *c*						+
	" *d*						+
	Chemistry 8		+	+			
	" *e*		+				
	Electrical Engineering 1					+	+

ENGINEERING

A. Entrance Subjects

Entering students whose major work is to be in any engineering department should be thoroughly prepared in elementary mathematics, and should have entrance credit in algebra (at least one and one-half units), plane and solid geometry, and plane trigonometry, in order to be able to take the first year's work in Applied Mathematics for engineers.

B. General Courses

I. APPLIED MATHEMATICS

First Year—Course 1 in Applied Mathematics.
Second Year—Courses 2 and 3 in Applied Mathematics. (See announcement of Department of Applied Mathematics, pp. 163-166.)

II. GENERAL TECHNICAL COURSES

1a. Linear Drawing and Lettering.—(Drafting two afternoons a week, first half of the semester.) Open to all students, and required of those whose major subject is in any of the engineering departments, whether or not they have received entrance credit in mechanical drawing. This requirement is waived, however, for a student who satisfies the instructor that he has had the equivalent of this course, by submitting work in linear drawing and freehand lettering, or by passing a special examination. The instruments and materials for this course cost from twenty to thirty dollars.

1 unit, either semester (Foss) MT or ThF 1:30-4:30

1b. Descriptive Geometry. — Including applications to shades, shadows, and perspective. (Two afternoons of drafting each week, November and December. Two lectures and two afternoons of drafting each week, January to May.) This course is open to students who have completed or who are taking Solid Geometry and Engineering 1*a*, and is required of students whose major subject is in any of the engineering departments.

1 unit, 1st semester; 4 units, 2d semester (Foss)
Lec. TTh 8:15, 10:15; Dft. MT or ThF 1:30-4:30

2. Applied Mechanics:—

a. Mechanics of Materials.—A theoretical study of the strength and elastic properties of the ordinary materials of engineering construction. The main subjects covered are simple tension, compression, and

shear; flexure, with application to simple, continuous, and non-homogeneous beams; long columns; torsion; repeated stress; sudden stress and resilience. (Lectures and recitations three hours a week.)

b. Testing of Materials.—Each student is required to make a series of experiments, testing the strength and elastic properties of structural materials. A careful record of all experiments is required of very student. (Laboratory work, six hours a week.)

Open to students who have completed the first- and second-year courses for Engineering students in Applied Mathematics; required of all students having Engineering as a major subject.

5 units, 1st semester (Wing, Moser)

Lec. MWF 9:15; Lab. MWF 10:15-12:15, or MT or ThF 1:30-430

3. Hydraulics:—

a. Theoretical Hydraulics.—This course treats of fluid pressure, the principles of fluid equilibrium, and the laws governing the flow of water through orifices, over weirs, in closed conduits, and in open channels, followed by a study of the basal theory of hydraulic turbines. Open to students who have completed courses 2 and 3 in Applied Mathematics.

5 units, 2d semester (Hoskins) MTWThF 9:15

b. Experimental Hydraulics.—Including the calibration and use of instruments for the measurement of pressure, velocity, and flow of water under various conditions; the investigation of friction in pipes, bends, valves, and other obstructions, etc. Six hours per week in the laboratory on experimental work, computations, and reports. Open to students who have taken or are taking Engineering 3*a*.

2 units, 2d semester (Moser)

MT 1:30-4:30 (for C. E. majors); MWF 10:15-12:15 (for M. E. majors); ThF 1:30-4:30

[*Note.*—See also Hydraulic courses listed under Mechanical Engineering: Testing of Hydraulic Machinery (M. E. 26); Hydraulic Power Stations (M. E. 35*b*).]

Laboratory Fees—Courses 1*b*, 2*b*, $2 each; 3*b*, $4.

I. CIVIL ENGINEERING

Charles David Marx, Charles Benjamin Wing, Leander Miller Hoskins, John Charles Lounsbury Fish, Professors.
John Harrison Foss, Assistant Professor.
Charles Moser, Instructor.

A. Topographic Engineering

4a. Elementary Surveying.—Recitations: systems of co-ordinates, measurements, choice of systems, errors, checks, surveys, graphical solution of topographic problems. Field-work: experimental exercises, surveys. Drafting-room: computing, mapping. (Recitations two hours, field work and drafting nine hours, each week.) Open to students who have completed Engineering 1*a* and Plane Trigonometry. Required of students in Civil and Mining Engineering.

5 units, 1st semester (Fish) Rec. TTh 9:15; Dft. M 1:30-4:30; Field ThF 1:30-4:30 (or S 9-4:30)

4b. Elementary Surveying.—For students in Mechanical and Electrical Engineering. (Field work, reading, and drafting, six hours each week.)

2 units, 1st semester (Fish)
Drafting and Field ThF 1:30-4:30 (or S 9-4:30)

4c. Advanced Surveying.—Supplementary to course 4*a*. Field work, computations, drafting, and use of references, in connection with work assigned to individuals or small groups according to their needs. Open by permission.

1 or more units, either semester (Fish) By arrangement

B. Railroad Engineering

6a. Railroad Surveying.—Recitations: curves and turnouts; preliminary and location surveys; earthwork. Field and office: exercises in laying out curves and taking cross-sections for topography and earthwork, and in plotting them; preliminary survey with profile and topographic map; paper location with profile and quantities; staking out paper location; earthwork surveys; final location profile and map; earthwork computations; distribution of material with use of mass diagram; overhaul computation. (Recitations two hours, drafting and field work nine hours, each week.) Open to students who have completed 4*a*. Required of students in Civil Engineering.

5 units, 2d semester (Fish)
Rec. TTh 9:15; Dft. M 1:30-4:30; Field ThF 1:30-4:30

6b. Railroad Location.—Locomotive tractive force and resistances thereto, velocity profile, momentum grade. Traction problems involving inter-relation of train weight, grade, speed, and characteristics of locomotive. Value of change in distance, curvature, rise and fall, and ruling grade, based on analysis of operating expenses. Pusher grades, balanced grades for unequal traffic and for adjacent divisions. Open only to students who have completed *6d*.

2 units, 2d semester (FISH) Rec. TTh 8:15

6c. Railroad Construction (Surveying and Engineering).—Field or office work assigned to individuals, according to their needs, along one or more of the following lines: supplementary work on simple, compound, and spiral curves, turnouts, connecting tracks, cross-sections, quantities, classification, and distribution. Excavating methods and plants. Situation and drainage surveys; preliminary plans and estimates; choice of structure and site; working drawings; staking out; inspection; estimates of work done. Collecting, recording, and filing information; computations and drawings; instructions and reports. A formal, written, detailed report is required on each engineering problem assigned. Open, by permission, to students who have completed *6a* or its equivalent.

1 or more units, either semester (FISH) By arrangement

6d. Engineering Economy.—The problem of economic selection, interest, sinking funds, first cost, salvage value and depreciation, elements of cost of service (including amortization), estimating and reliability of estimates, basis of economic comparison, procedure in economic comparison. (Recitations and problems, six hours per week.)

2 units, 1st semester (FISH) Rec. TTh 11:15

C. Structural Engineering

8a. Elements of Design:—

1. *Materials.*—[See course 9 in Mining and Metallurgy.]

2. *Mechanics of Structures.*—Course 3 in Applied Mathematics is extended to the analytical and graphical determination of stresses in simple structures.

3. *Theory of Structural Details.*—Course 2 in Engineering is extended to an investigation of the distribution of stresses in structural details.

Open to students who have completed course 1 in Engineering, and who have taken or are taking course 2 in Engineering, and also course

9 in Mining and Metallurgy. Required of all students having Civil Engineering as a major subject.

3 units, 1st semester (Wing) WThF 1:30-4:30

8b. Elements of Design:—

1. *Materials.*—Structural materials, other than metals, are studied from an engineering standpoint. Wood, stone, brick, limes, cement, etc., are considered in order. (Lectures and assigned reading three hours a week first half of semester.)

2. *Foundations.*—Under this head are considered the bearing power of soils, strength of piles, distribution of pressures, and similar details connected with the design of simple foundations. (Lectures and assigned reading three hours a week, last half of semester.)

3. *Design.*—Complete designs are made, including working drawings, bill of materials, and estimate of cost, of some simple structure, such as a mill building or highway structure. (Drafting-room, nine hours a week first half of semester; six hours a week last half of semester.)

4. *Testing.*—Extending the work of course 2*b* in Engineering. Each student is required to make a series of experiments, testing the physical properties of cement and other masonry materials. (Laboratory, last half of semester.)

Open to students who have completed course 8*a* in Engineering; required of all students having Civil Engineering as a major subject.

5 units, 2d semester (Wing, Moser)
Lec. MWF 8:15; Dft. and Lab. WThF 1:30-4:30

8c. Elements of Design.—Courses 8*a* and 8*b* abridged to meet the requirements of students having Mining, Mechanical, or Electrical Engineering as a major subject. Special applications are made to hoisting and conveying structures, mill buildings, and central station buildings. Open to students who have completed courses 1 and 2 in Engineering and course 9 in Mining and Metallurgy.

2 or 3 units, 2d semester (Wing) By arrangement

9. Structural Design.—This course comprises the determination of the stresses in modern types of bridges, including cantilever and swing spans, masonry arches, and arch ribs; the discussion of the most economical types, spans, and dimensions of bridges and bridge members; the study of the methods of constructing sub-aqueous foundations, shop methods, erection, inspection of material, specifications, and other factors influencing the design of structures. Designs are made by each student to fulfill actual conditions. Open to students who have

completed course 8. (Lectures two hours per week, drafting nine hours.)

5 units, 1st semester; 5, 3, or 2 units, 2d semester (WING)
Lec. TTh 10:15 (1st sem.), 8:15 (2d sem.); Dft. WThF 1:30-4:30

D. HYDRAULIC ENGINEERING

12. Water-Supply Engineering for Towns and Districts.—Sources of supply. Collecting and storing of water, either for water supply of towns or for irrigation purposes. Settling, filtering, conducting, and delivering of water, including the study and design of all accessory works. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a* and 8*a* in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 1st semester (MARX)
Lec. MWF 10:15; Dft. MT 1:30-4:30

13. Sanitary Engineering.—Including sewerage of towns and drainage of lands. Special attention will be given to the study of all municipal sanitary problems, such as removal of sewage, destruction of garbage, construction, maintenance, sweeping, and repairs of streets and pavements. (Three hours lectures and recitations, six hours drafting.) Open to students who have completed courses 2 and 3 in Engineering and 4*a*, 8*a*, and 12 in Civil Engineering; required of all students who take their major in Hydraulic Engineering.

5 units, 2d semester (MARX) Lec. TTh 9:15; Dft. MT 1:30-4:30

15. Construction of Canals, River and Harbor Improvements.—Lectures and designing as per arrangement. Open to students who have completed courses 2*a*, 2*b*, and 3 in Engineering and 4*a* and 8*a* in Civil Engineering.

2 units, both semesters (MARX) MT 1:30-4:30

16. Technical Seminary.—Study of German and French technical journals. Open only to fourth-year students in Civil Engineering.

2 units, both semesters (MARX) By arrangement

LABORATORY FEES—Courses 6*b*, 6*c*, 6*d*, 50 cents each: 8*b*, $1; 4*a*, 4*b*, 6*a*, $4 each.

II. MECHANICAL ENGINEERING

William Frederick Durand, Guido Hugo Marx, William Rankine Eckart, Professors.

Everett Parker Lesley, Associate Professor.

Charles Norman Cross, Lawrence Edminster Cutter, Assistant Professors.

Edward John Stanley, James Bennett Liggett, Theron James Palmateer, Robert Henry Harcourt, Horatio Ward Stebbins, Instructors.

The following courses constitute a five years' curriculum leading to the degree of Mechanical Engineer. Students successfully completing the first four years of this curriculum will be granted the degree of Bachelor of Arts.

[Numbers following subjects indicate number of units credit for the year.]

First Year—Applied Mathematics (10); Freehand Drawing (2); Chemistry (9); Shop Work (6); French or German (6); Mechanical Engineering *A* (2).

Second Year—Applied Mathematics (6); Mechanics (10); Linear Drawing and Descriptive Geometry (6); Physics (8); Shop Work (2)

Third Year—Applied Mechanics (5); Hydraulics and Hydraulic Motors (5); Hydraulic Laboratory (2); Machine Drawing (2 or 3); Elementary Machine Design (5); Surveying (2); Metallurgy (3); Physics (2); Electrical Engineering (3); Shop Work (3).

Fourth Year—Heat Engines (6); Engineering Reports (2); Machine Design (8); Experimental Engineering (6); Electrical Engineering (6); Shop Work (5).

Fifth Year—Thermodynamics (1); Advanced Design (3 plus 3 elective); Experimental Engineering (3); Economics (2); Shop Administration (3); Power Plants (4); Pumping Machinery (2); Seminary (elective) (2); Thesis (8); Hydraulic Machinery Laboratory (2 elective).

The above represents the requirement for the student entering regularly with minimum mathematics and no advanced credit. For such student, in addition to the above curriculum, there should be a maximum possible elective among other subjects in other departments of the University of nineteen units. For students who may bring advanced credit in drawing, shop work, chemistry, and other subjects, the amount of possible elective may be considerably increased.

A. General Survey of Engineering Industries.—Special lectures and assigned topics. Required of first-year students.

1 unit each semester By arrangement

1-8. Shop Work:—

1a. Forge Practice.—(2 exercises a week, half year.)

1b. Lecture in Forge Work.

3a. Foundry Practice.—(2 exercises a week, half year.)

3b. Lecture in Foundry Work.

5. Woodworking.—(2 exercises a week, half year.)

6a. Pattern Shop Practice.—(2 exercises a week, half year.)

6b. Lecture in Pattern Shop Work.

Courses *3a* and *3b* are prerequisite to courses *6a* and *6b*.

7a. Elementary Machine Shop Practice.—(2 hours a week, half year.)

Courses *1a* and *1b* are prerequisite to course *7a*.

8. Advanced Machine Shop Practice.—(3 hours a week, half year.)

Courses 1-8 are open to all students, and required of students in Mechanical Engineering.

2 or 3 units, each semester

(Lesley, Stanley, Liggett, Palmateer, Harcourt)

10. Shop Administration.—A course of lectures on workshop organization and administration, factory accounting, wage systems, selection of machinery, factory methods, etc. Prerequisites: courses 1 to 7 inclusive.

3 units, 1st semester (Lesley) MWF 9:15

11. Elementary Machine Drawing.—Practice in making working drawings of machine parts, and in making tracings from these drawings. The purpose of the course is, not only to train the student in the technique of drafting and dimensioning, but also to familiarize him with the elements of machines, and, therefore, no drawings are made from copy, but all are made from the student's own sketches of the actual model. (Six or nine hours a week in drafting room: three hours work for one unit credit.) Prerequisite: course *1a* in Engineering, and first semester's work in Engineering *1b*, or its equivalent; and, for Mechanical Engineering students, course 12 in Mechanical Engineering.

2 or 3 units, either semester (Cutter)

(I) TTh 8:15-12:15; (II) MT 1:30-4:30

12. Freehand Machine Drawing.—Practice in making freehand sketches of machine parts, and their dimensioning in practical form

for use in the shop, the sketches being made according to the principles of orthographic projection. The aim is to train the student in the reading of machine drawings through making a considerable number of sketches from actual machines and machine parts, and at the same time to familiarize him as much as possible with the actual machine parts. Open to all students, and required of students in Mechanical Engineering. (Six hours a week, second semester.)

2 units (CUTTER) ThF 1:30-4:30

13. Elementary Machine Design.

a. Function of machines; motion, force, and work in machines; analysis of mechanisms; velocity, acceleration, and effort diagrams; parallel motions; cams; ratchets; toothed wheels; valve gear analysis and design. The aim is, not merely to present a course in pure mechanism, or kinematics, but also—by the introduction of the consideration of force, work, and energy, as well as motion—to show the purposes for which the mechanisms are used and the manner in which they function. (Three hours a week, lectures and recitations, second semester.) (3 units).

b. Drafting course applying the principles treated in *a*. (Six hours a week drafting, second semester.) (2 units)

Prerequisites: course 11 in Mechanical Engineering and course 1*b* in Engineering. Courses *a* and *b* must be taken together and are required of students in Mechanical Engineering.

5 units, 2d semester (G. H. MARX)

Lec. MWF 8:15; Drafting M or T or F 1:30-4:30

14. Machine Design.—Study of machine elements, such as bolts and screws; riveted joints and boiler design; keys, fits and fitting; axles, shafts, and spindles; journals, bearings, friction, and lubrication; ball and roller bearings; sliding surfaces; couplings and clutches; gear, belt, rope, and chain transmission systems; flywheels; brakes; springs; frames and supports; cylinders, etc.; leading to the design of complete simple machines. (Two hours a week recitation and lectures, six hours in the drafting-room, throughout the year.) Open to students who have completed course 13 in Mechanical Engineering, and who are taking course 2 in Engineering; required of students in Mechanical Engineering.

4 units, both semesters (G. H. MARX)

(1st sem.) Lec. MW 10:15; Dft. MT 1:30-4:30

(2d sem.) Lec. TTh 8:15; Dft. MW 9:15-12:15

15. Machine Design.—An abridged treatment of the field covered

in courses 13 and 14. (Three hours a week recitations and lectures. six hours a week in the drafting-room, first semester.) Open to students who have completed Engineering 1*b*, Mechanical Engineering 11, and are taking Engineering 2. Intended for Engineering students whose major subject is not Mechanical Engineering.

5 units, 1st semester (G. H. Marx)

Lec. MWF 8:15; Dft. ThF 1:30-4:30

16. Advanced Machine Design.—Design of complete machines. Students may elect machine tools, cranes, steam or gas engines, or special problems. (One lecture and six hours drafting per week.) Intended for fifth-year students who have completed courses 14, 32, and 33.

3 units, both semesters (G. H. Marx, Cutter)

Lec. F 10:15; Dft. 1:30-4:30, by arrangement

21-30. Experimental Engineering.

21. Calibration and Use of Engineering Apparatus and Instruments, including gas meters, thermometers, planimeters, indicators, dynamometers, fuel calorimeters, and the testing of lubricating oils. (One lecture, three hours in the laboratory, and five hours on reports, per week.) Required of fourth-year students in Mechanical Engineering.

3 units, 1st semester (Eckart, Cross, Stebbins)

Lec. Th 10:15; Lab. WThF 1:30-4:30 and F 9:15-12:15, by arrangement.

22. Testing of Steam Engines and Boilers, including determination of engine clearance; measurement of the flow of steam; steam calorimetry; valve setting; mechanical efficiency, economy, and thermal tests of steam engines, steam turbines, gas engines; tests for speed regulation, flue gas analysis, and the testing of boilers. (One lecture, three hours in the laboratory, and five hours on reports, per week.) Open to students who have completed courses 21 and 32. Required of fourth-year students in Mechanical Engineering.

3 units, 2d semester (Eckart, Cross, Stebbins)

Lec. T 10:15; Lab. 1:30-4:30, by arrangement

23. Testing of Power Plant Auxiliaries, including hot-air engines, injectors, heaters and economizers, blowers, turbo-compressors, condensers, refrigerating machinery, automobiles, and a complete power-plant test. (One lecture, three hours laboratory, and five hours on reports per week.) Open to students who have completed courses 21 and 22. Required of fifth-year students in Mechanical Engineering.

3 units, 1st semester (Eckart, Cross, Stebbins)

Lec. F 8:15; Lab. 1:30-4:30, by arrangement

24. An Abridged Course in Experimental Engineering, intended for Civil Engineering, Geology and Mining, and Chemical Engineering students. Includes the calibration of apparatus, testing of steam and gas engines, steam turbines, boilers, etc. (One lecture, three hours in the laboratory, and eight hours on reports, every two weeks.) Open to students who have completed course 32.

2 units, 1st semester (ECKART, CROSS, STEBBINS)

Lec. T 9:15 (alternate weeks); Lab. 1:30-4:30 by arrangement

26. Testing of Hydraulic Machinery.—Including tangential water wheels, turbines, rams, centrifugal, rotary, jet, steam pumps, and sewage ejectors, and the investigation of surges in pipe lines, etc. (One lecture, three laboratory hours, and eight hours on computations, reports, etc., every two weeks.) Open to students who have taken Engineering 3*b* and Mechanical Engineering 21, 22, or 24.

2 units, 2d semester (ECKART, CROSS)

Lec. F 8:15 (alternate weeks); Lab. 1:30-4:30, by arrangement

30. An Advanced Laboratory Course in the Investigation of Engineering Problems. Open to all students who have completed courses 21, 22, and 23.

1 to 5 units, both semesters (ECKART, CROSS)

31. Engineering Reports and Specifications.—Practice writing, with occasional lectures. Required of fourth-year students in Mechanical Engineering.

1 unit, each semester, as assigned

32. Heat Engines.—Mechanical theory of heat and its applications. (Two lectures and three hours' office work per week.) Required of fourth-year students in Mechanical Engineering.

3 units, 1st semester (DURAND) TTh 9:15-12:15

33. Heat Engines.—Continuation and application of course 32. (Two lectures and three hours' office work per week.) Required of fourth-year students in Mechanical Engineering. Lecture and office work as for 32.

3 units, 2d semester (DURAND) TTh 9:15-12:15

34. Thermodynamics.—A course in theoretical thermodynamics, with special reference to heat engines, and intended to supplement course 32, which is a prerequisite. Required of fifth-year students in Mechanical Engineering.

1 unit, 2d semester (DURAND) M 8:15

35. The Mechanical Engineering of Central Power Stations.—Lectures. Prerequisite, course 31.

2 units, 1st semester (DURAND) MW 10:15

35b. Hydraulic Power Stations.—A discussion of the principles which enter into the design of hydraulic power stations: general control of water in tunnels and penstocks, surge chamber control of surges and shocks, valves and regulating devices, penstocks and their installation, selection of units, characteristics of impulse and reaction types, speed regulation, installation tests, and special problems. Open to students who have completed Engineering 3*a*.

2 units, 1st semester (DURAND) MW 8:15

36. Pumping Machinery.—A lecture course for fifth-year students. Prerequisite: course 31, first semester.

2 units, 2d semester (DURAND) TTh 10:15

37. Seminary.—A weekly conference for the discussion of current engineering literature and of special topics. Open to senior and advanced students only.

1 unit, both semesters (DURAND) By arrangement

LABORATORY FEES.—Courses 1*a*, 3*a*, 7*a*, $4 per credit hour; courses 5, 6*a*, $3 per credit hour; course 8, $2 per credit hour; courses 21, 22, 23, $6; courses 24, 26, 30, $2 per credit hour; 32, $1; 35, 50 cents.

III. ELECTRICAL ENGINEERING

HARRIS JOSEPH RYAN, Professor.
JAMES CAMERON CLARK, Assistant Professor.
FRED L. MULOCK, Instructor.

A five-year curriculum is arranged for students who will be graduated with the degree of Engineer in Electrical Engineering. The courses taken up during the first four years are identical in Mechanical and Electrical Engineering; both classes are registered in the Mechanical Engineering department. Students successfully completing this portion of the curriculum will be graduated with the degree of Bachelor of Arts. While pursuing courses scheduled for the fifth year of the Electrical Engineering curriculum students are registered as majors in the Electrical Engineering Department.

First, Second, Third and Fourth Year courses are identical with corresponding Mechanical Engineering courses.

Fifth Year—Differential Equations, Hyperbolic Functions and Determinants (Applied Mathematics, 5 units); Electrical Engineering Technology (Electrical Engineering *4a*, lectures, 5 units, and *4b*, laboratory, 8 units): Photometry and Illumination (Physics *9a*, 1 unit); Alternating and Transient Current Phenomena (Electrical Engineering, 5 units); Electrophysics: Foundation of Electrotechnics (Physics, 4 units); Thesis (Electrical Engineering *T*, 6 units); Seminary (Electrical Engineering *S*, 2 units). Total, 36 units.

1. **Electricity in Engineering.**—An abridged course in the industrial applications of electricity, intended for non-electrical engineering students. Prerequisites: first five semesters of any of the Stanford Engineering curricula.

4 units, 2d semester (Clark, Mulock) Lec. WF 9:15; Lab. by arrangement

2. **Electrical Energy.**—Required of third-year students in Mechanical and Electrical Engineering. Class and laboratory instruction in the technology of magnetic, electric, and electrostatic phenomena, electrical machinery and auxiliaries in continuous and alternating current working. Prerequisites: Applied Mathematics 1, 2, 3; Engineering *1a, 1b, 2a, 2b;* Mechanical Engineering 11, *13a, 13b;* Physics *6a, 6b,* 9.

2a. Recitations.

1 unit, 2d semester (Mulock) Th 8:15-10:15

2b. Laboratory Work.

2 units, 2d semester (Clark, Mulock) MTWTh 1:30-4:30

[Course 2 is supplemented by Physics 9, laboratory work in electrical measurements, 2 units, 1st semester.]

3. **Electrical Engineering.**—Required of fourth-year students in Mechanical Engineering and Electrical Engineering. Lectures, laboratory, and class work. Prerequisites: Electrical Engineering *2a, 2b;* Engineering *3a.*

3a. Lectures.—General Practice. (1) Standardization authorized by the A. I. E. E. (2) Fire Hazard, National Electric Code. (3) Transmission Economies. (4) Standard Machinery, Auxiliaries and Structural Supplies. (5) Municipal Distribution of Electricity for Miscellaneous Service. (6) Long Distance Transmission of Power for General Purposes. (7) Discussion of Typical Installations. (8) Ele-

ments of Finance Controlling the Uses of Electricity. (9) Survey of Electrical Industries. (10) Historical and Biographical Sketches.

4 units, 1st semester (RYAN) MTWTh 8:15

3b. Laboratory Work.—Characteristic performance of standard machinery and auxiliary apparatus; tests of machinery and auxiliaries for capacity, and acceptance.

2 units, 2d semester (CLARK, MULOCK) By arrangement

4a. Electrical Engineering Technology.—Lecture course. Theory of characteristic performance of machinery, transformers, transmission lines, distributing systems and auxiliaries.

5 units, 2d semester (RYAN)

4b. Electrical Engineering Technology.—Laboratory course. Material tests; machinery and auxiliaries design data tests; low and high frequency high voltage phenomena and insulator tests; special meter performance tests and calibrations.

8 units, 1st semester (RYAN, CLARK, MULOCK)

5. Alternating and Transient Current Phenomena.—Steinmetz and Kennelley methods, including application of hyperbolic functions and determinants to the characteristic performance of transmission lines. Lectures and recitations.

5 units, 2d semester

10. Graduate Work.—Advanced study and investigation as assigned to meet the needs of the individual.

S. Seminary.—A weekly conference for the discussion of current electrical engineering literature and of special topics.

1 unit, both semesters (RYAN)

T. Thesis.—Subjects as approved to suit the needs of the individual.

1 unit, 1st semester; 5 units, 2d semester (RYAN, CLARK, NIELSEN)

The Stanford Branch of the American Institute of Electrical Engineers is an organization authorized by the Institute and maintained by the members of the graduating class for the discussion of the Proceedings of the Institute, and of other topics as assigned, and the review of current electrical literature.

LABORATORY FEES—$2 per unit of university credit.

SYLLABUS FEES—Applicable to syllabus, lantern slides, and charts, $1 per course-section.

MEDICINE

Ray Lyman Wilbur, Dean (first semester).
William Ophüls, Acting Dean (second semester).
George Burbank Somers, Secretary of the Medical Faculty.

Buildings and Equipment

The buildings in San Francisco occupy four fifty-vara lots bounded by Clay, Sacramento, and Webster streets, and consist of the Clinical and Laboratory Building, including Lane Hall; Lane Hospital, a modern building in brick and stone, with a capacity of one hundred and eighty beds; the Nurses' Home; and the Lane Medical Library. The Clinical and Laboratory Building has recently been remodeled and is devoted entirely to outpatient clinics and laboratories.

The laboratories of Anatomy, Bacteriology and Immunity, Chemistry, and Physiology are located on the Campus at Stanford University.

Clinical Opportunities

lane hospital

The University Hospital was designed as a teaching Hospital and built by Dr. Levi Cooper Lane. It is under the immediate control of the Clinical Committee appointed from the Medical Faculty by the President of the University with the approval of the Board of Trustees. It is a general hospital receiving both private and clinic patients, situated at Clay and Webster Streets and directly connected with the Clinical and Laboratory Building. In its clinical department there are over one hundred beds used for purposes of teaching. These are arranged into five wards, one each for Surgery, Medicine, Gynecology, Obstetrics, and Pediatrics. As the patients in these clinical beds are sent in largely from the Outpatient clinic and as they remain in the Hospital for short periods of time only, unusual opportunity is offered for the study of selected cases. Plans have been completed for the construction of a new surgical pavilion, to be known as The Stanford Hospital, to accommodate one hundred and eighty patients. The engine-room and power-house for this new hospital are now completed. A large central laundry has recently been constructed.

The tuberculosis clinic is held in close cooperation with the San Francisco Society for the Study and Prevention of Tuberculosis.

The Associated Charities sends to the clinic a portion of its maternity cases, and provision is also made for the care of a portion of their

sick poor. The San Francisco Maternity contributes a considerable sum towards the support of the Woman's Clinic. This is particularly devoted to out- and in-patient obstetrics. The Fruit and Flower Mission assists greatly in the care of maternity cases.

During the year 1912-13 Mrs. Emily B. Hopkins presented the Hospital with $10,000 for the endowment of a bed. Mrs. Kate Felton Elkins provides maintenance for a bed, and she and her brother, Charles N. Felton, Jr., provide a fund for the care of clinical patients. Other friends of the Hospital have contributed freely for the care of clinical patients.

Charles G. Lathrop, former Treasurer and Business Manager of the University, left $10,000 by his will for the Medical School of the University.

David Hewes left $6,000 to the Lane Hospital for the purpose of endowing and maintaining a bed to be known as the "David Hewes' Free Bed."

SAN FRANCISCO HOSPITAL

The Medical School controls over one hundred beds in the new San Francisco Hospital, averaging about a thousand patients per year. This hospital, erected at an expense of two million dollars, is one of the finest and most complete structures of its kind in America. Possessing separate buildings for the care of contagious diseases and of tuberculosis, in addition to the main group for general surgical and medical cases, there is centered within the hospital grounds, convenient for teaching purposes, an abundance as well as a great variety of clinical material.

OUTPATIENT DEPARTMENT

The lower floor of the Clinical and Laboratory Building is devoted entirely to the Surgical Outpatient Clinic and its various subdivisions; the second floor to the Medical Outpatient Clinic with its subdivisions; the three upper floors contain the Pathological Museum and the laboratories of Experimental Medicine, Pathology, Pharmacology, Obstetrics and Gynecology, and Experimental Surgery. The laboratory of Clinical Pathology and the Outpatient Department are separated only by a short corridor from the clinical wards of the Hospital, so that both in- and out-patients are equally available for teaching purposes. The front part of Lane Hall has been converted into a modern amphitheater suitable for demonstrations. About twelve thousand new patients were received during the past year, with a total number of visits of over ninety thousand.

Hospital Interneships

Eleven internes and a House Officer are appointed annually at the Lane Hospital. Five of these are Senior Internes and have a continuous service for one year with the option of renewal in any of the following divisions: Medicine, Pediatrics, Surgery, or Obstetrics and Gynecology. Six Junior Internes, with an alternating service, are likewise appointed. They are assigned in rotation to a two months' service in Psychiatry at the Napa State Hospital. Four of these are eligible for Senior Interneships later. A Senior Externe is also appointed for the Eye, Ear, Nose, and Throat Department. Interneships are also available in the Stanford Service at the San Francisco Hospital and at other hospitals in the City and the State.

Library Facilities

The Lane Medical Library, founded by the Directors of Cooper Medical College, as provided by the will of Mrs. Levi Cooper Lane, comprises 40,000 volumes. The most valuable historical portion was obtained from the New York Hospital, the oldest medical library in the country. About 500 periodicals are currently received, and the numerous files of bound volumes are practically complete.

Admission to the School of Medicine

Three years of collegiate work in Stanford University (approximately ninety unit hours), or its equivalent as accepted by the Committee on Advanced Standing, is required for admission to the School of Medicine. This preparatory training must include one year of Physics, Chemistry including Qualitative Analysis and, beginning with 1919, Organic Chemistry,* one year of Physiology or Biology, with laboratory work in each, and such a reading knowledge of French or German as shall be acceptable to the School of Medicine. It is recommended that a lecture and laboratory course be taken in Psychology.

Candidates for admission to the School of Medicine, or for advanced standing in the School, are permitted to register with one con-

*Students other than Chemistry majors preparing for medicine at Stanford University are recommended to take the combined course in quantitative and qualitative analysis (course *k* in Chemistry) instead of the full courses in these subjects (*b* and *d*).

On account of the crowded condition of the Medical curriculum in the first year prospective students are urgently advised to take the required three units in Organic Chemistry before entrance to the School of Medicine (required beginning with 1919).

dition, but the condition must be removed within one year to the satisfaction of the head of the School or Division in which the condition was incurred.

The State Law governing the practice of Medicine in California prescribes that every person before practicing Medicine or Surgery must produce satisfactory testimonials of good moral character and a diploma issued by some legally chartered medical school approved by the Board of Medical Examiners, the requirements of which school shall have been at the time of granting such diploma in no degree less than those prescribed by the law. The main provisions of this law are that the applicants must show records of four medical courses of thirty-two weeks' duration, following a preliminary preparation, at present of a high school course or specified equivalent and after January 1, 1919, in addition, a course which includes at least one year of work of college grade in each of the subjects of Physics, Chemistry, and Biology. The specified four years' medical course includes over 4000 schedule hours, embracing the usual medical curriculum. In the course of study outlined the hours required are actual work in the class room, laboratory, or hospital, and at least eighty per cent of actual attendance is required.

Students in any Department of the University who desire to enter upon the study of Medicine and who have included in their course of study the subjects required for admission to the Medical School, may, at the beginning of their fourth or senior year in the University, enroll as students in medicine and continue as candidates for the degree of Bachelor of Arts.

A student who, through delay in making a choice of Medicine, is unable to complete the requirements of his Major department and the first year in Medicine by the end of his senior year, may nevertheless register in Medicine and be eligible for the degree of A. B. in the Department of Physiology and Histology at the end of the eighth semester—the second semester in Medicine.

Students who have included in their course of study the subjects required for admission to the Medical School while retaining their registration in their Major Department as candidates for the degree of A. B., must also enroll in the School of Medicine during the fourth year and pay the fees of the School in order that this year may count as part of the four years' registration in Medicine as required by the law of the State and the five years required by the regulations of the University. Tuition fees are required for but four years of the medical course.

The Eight Years' Curriculum

The combined eight years' curriculum—three years of college work and five years in medicine—leads to the degrees of Bachelor of Arts and Doctor of Medicine.

Limitation of the Number of Students

The accommodations of the Medical School at San Francisco render it inadvisable to admit more than 25 students to each class. It will therefore be necessary to restrict the number of students to 25 in each class, commencing with the fourth semester. There are no restrictions in regard to entrance to the first three semesters in medicine at Stanford University, but all students entering the medical classes at Stanford University cannot be assured that they will be able to continue their medical studies at the University for more than three semesters.

Students once admitted to the fourth semester may continue to graduation, provided scholarship and conduct are satisfactory, and that they present themselves for registration on the regularly appointed days. Places will not be held for such students after the regular registration days, except by special permission granted in advance by the Dean.

Students planning to continue their work at Stanford University after the first year should notify the Dean in writing to that effect at as early a date as possible, and file a complete record of their preparatory, collegiate, and medical work with the Registrar before the end of the third semester in Medicine. No one will be permitted to enroll in the fourth semester in Medicine with less than 135 units of credit or with a condition in more than 5 units in any required subject, except by special vote of the Faculty.

Special Workers

Physicians and others who are properly qualified, but not candidates for a degree, may be admitted to work in the School of Medicine with the permission of the Dean of the School and of the professor or professors concerned. Such persons shall be listed as Special Workers and pay such fees as are required by the Dean and the Executive Head of the Division concerned.

The Curriculum in Medicine

The required period of study for the degree of Doctor of Medicine is five years (ten semesters). The work of the first three semesters is given at Stanford University and is devoted to anatomy, bacteriol-

ogy, chemistry, embryology, histology, neurology, and physiology. The next five semesters are devoted to work in the pharmacological, pathological, and clinical laboratories and in the hospital wards and the outpatient department in San Francisco. The last year is spent in hospital work.

In order to correlate the work of some of the Divisions and to facilitate research in others, all courses in Medicine, except those in anatomy, bacteriology, chemistry, and physiology, are given in San Francisco. By reducing the number of required hours to approximately the number decided upon by the Association of American Medical Colleges, the student's opportunity for taking optional and elective courses has been increased and time obtained for thesis work.

Required Interne Year

All students are required to take a fifth practical year in Medicine before receiving the degree of Doctor of Medicine. Arrangements may be made so that the fifth year may be spent as worker in a laboratory. No tuition fee is required of internes and most interneships include a small salary.

Fees

The tuition fees of the Medical Department are $150 per annum for four years, payable in installments of $75 each semester; $5 per semester for the first three semesters, covering charges for material; and such other deposits to cover breakage or loss of apparatus and materials, as may be required in any department or division, these deposits being returnable, less charges for breakage, loss, or wear and tear of apparatus, or for materials used. The total deposits for this purpose may vary from $10 to $20 per annum.

Microscopes and Instruments

By action of the Medical Faculty taken May 12, 1912, students will be expected to supply themselves with microscopes. The Medical School offers the use of a microscope for one college year, not including the summer vacation, to students who do not possess instruments of their own, on deposit of $10 and a rental of three dollars per semester. This deposit, less the cost of necessary repairs, is refunded on return of the microscope. In the laboratories of physiology and histology and in embryology microscopes are furnished free.

All students are expected to provide themselves with a satisfactory blood counter for their own use, and such other pieces of individual apparatus as are essential to the required work.

Requirements for the Degree of Doctor of Medicine

The candidate for the degree of Doctor of Medicine must, according to the laws of the State, have attained the age of twenty-one years, and have attended a medical college of recognized standing for four years. He must further have fulfilled the entrance requirements of the Medical School of Stanford University before enrolling as a medical student, have satisfactorily completed the required curriculum, passed all examinations, paid in full the required fees, and have spent the last two of the five years in Medicine at the University. Physicians who have already received the degree of Doctor of Medicine are not received as candidates for this degree by the Stanford Medical School.

Regulations Concerning Theses

A Thesis based as much as feasible upon research work will be required of each student. If the thesis is not completed previously, four curriculum hours of the seventh and eighth semesters are to be devoted to its preparation under the supervision of one of the Divisions.

Students of Medicine may select the Division in which they desire to write their Thesis, and if properly qualified may begin work on the same at any time before the beginning of the second semester of their fourth year in Medicine. The topic for investigation or the subject matter for study shall be chosen with the advice and consent of the Executive Head of the Division concerned, and no change of subject shall be made without the consent of the Executive under whose direction the work was begun. Except by special permission theses must be completed by the end of the fourth year in medicine.

Advanced Degrees in the Medical School

The Divisions of the Medical School are considered as equivalent to other departments of the University in respect to candidacy and requirements for the degrees of Master of Arts and Doctor of Philosophy, and all the University regulations apply to these divisions and division faculties as to departments and department faculties, with the following modifications and limitations:

1. Candidates for these degrees must have received the degree of A. B. at Stanford or an equivalent degree elsewhere, and must have completed all requirements for admission to the School of Medicine, and such other requirements as each division faculty may prescribe.

2. Time spent in candidacy for the degree of Master of Arts or Doctor of Philosophy will not be counted toward the degree of Doctor of Medicine.

3. Candidates for these degrees in the divisions of Medicine, Surgery, and Obstetrics and Gynecology, must have received the degree of Doctor of Medicine.

Medical Adviser

A Medical Adviser is appointed for the Medical students in San Francisco. All students are expected to undergo an annual medical examination and to call in the Medical Adviser in case of illness. The Medical Adviser for 1915-16 is Dr. Ernest Charles Dickson.

Students' Guild

The Guild is a student organization which seeks to make provision for the care of all cases of serious illness among its members. An arrangement has been made by the Guild with the Lane Hospital for the care of Medical students with non-contagious diseases. The Medical students are required to become members of the Guild by paying the fee, which is two dollars each semester. A uniform hospital rate of one dollar per day is charged all members of the Guild, in addition to such special charges as may be incurred for extra service.

SUMMER GRADUATE MEDICAL COURSE

July 6 to August 14, 1915

Medical Group

1. Clinical Medicine. (Addis, Dickson, Boardman, Oliver, Clark, O'Neill, Tupper) Daily 11-12

Daily clinics and demonstrations will be given, covering the various methods of diagnosis and treatment. Special attention will be devoted to the following: Diabetes and Gout (Addis); Gastro-intestinal Diseases (Boardman); Tuberculosis (Clark); Cardio-Renal Diseases (Dickson, Tupper); Infectious Diseases (O'Neill); Tropical Diseases (Oliver). For this work the material of the Out-patient Department of the University, the wards at Lane Hospital, the Stanford wards at the San Francisco Hospital, the Tuberculosis Clinic and Tuberculosis Hospital, and the Isolation Hospital will be available. Fee, $35.

2. Clinical Bacteriology. (Dickson) MWF 2-4

For a class of from four to eight members. The work is to cover bacteriological methods of diagnosis, including blood culture, technic, etc.

The laboratory will be open daily for work, and facilities will be provided for individual work if desired. Talks, demonstrations, and special instruction will be given on the designated days. Fee, $35.

3. Clinical Pathology. (Addis, Mehrtens) TThS 2-4
The class is limited to ten. The work will consist of talks on the various methods and their application and interpretation in Clinical Medicine, with practical laboratory work in the examination of blood, urine, stools, sputum, stomach contents, cerebro-spinal fluid, etc. The laboratory will be open daily for work. Fee, $35.

4. Special Work on Diabetes and Gout. (Addis)
The laboratory will be open every afternoon for a class of six. Work will cover the theoretical consideration of diabetes and gout, laboratory work in methods of estimating nitrogen, ammonia, sugar, acidosis, etc., and methods of computing diets, together with clinical studies on ward patients. Fee, $25.

5. Actinography. (Boardman) TTh 4-5
The class is limited to six. The work will cover the field of X-Ray diagnosis and treatment, especial attention being given to the study of gastro-intestinal diseases, with practical work in fluoroscopy, radiography and radiotherapy. Fee, $25.

6. Clinical Neurology. (Schaller, Wolfsohn)
TTh 10-11; S (San Francisco Hospital) 10-11
The class is limited to ten. The work will consist of clinical studies and demonstrations of neurological material. On Tuesday and Thursday Dr. Schaller will meet the class in the Neurological Clinic in the Medical School Building. On Saturday Dr. Wolfsohn will hold rounds on the neurological material in the Stanford service at the San Francisco Hospital. Fee, $25.

7. Dermatology and Syphilis. (Alderson) TWF 9-10
The class is limited to six. The work will consist of clinical studies and demonstrations of dermatological cases, especial attention being given to syphilis and the various methods of treatment, to the histopathology of skin diseases and vaccine therapy. Fee, $35.

8. Pediatrics. (Yerington, Huffaker, Lyman) MWF 10-11
The class is limited to ten. The work will consist of clinical studies and demonstrations, together with instruction in infant feeding. Fee, $25.

9. Serology. (Oliver) M 4-5
The class is limited to six. The work will consist of talks, demonstra-

tions, and practical work in serological diagnosis, Wassermann test, etc. Laboratory will be open for work in odd hours. Fee, $25.

10. Cardiac Arrythmias. (DICKSON) MWF 4-5
The class is limited to four members. The work will include a discussion of the mechanism of the normal heart beat and the study of the more usual types of cardiac arrhythmias. Especial attention will be paid to the use of the Polygraph and the Electro-cardiograph in the diagnosis of cardiac diseases and to the interpretation of the records obtained by the use of these instruments. Fee, $35.

SURGICAL GROUP

11. Clinical Surgery. (COWAN, ELOESSER, ROTHGANGER) TThS 9-10
The class is limited to ten. The work will include clinical studies and demonstrations of surgical cases, in the Out-patient Department and wards at Lane Hospital by Drs. Cowan and Rothganger, and in the Stanford wards at the San Francisco Hospital by Dr. Eloesser. Operative demonstrations will be given by Dr. Eloesser at the San Francisco Hospital, and the operating room will be open for members of the class at Lane Hospital clinic on operating days. Fee, $25.

12. Operative Surgery on the Cadaver. (EAVES) TF 10-12
The class is limited to six. The work will cover important amputations, ligations of the principal arteries, and general operative surgery on the cadaver. Fee, $30.

13. Orthopedic Surgery.

(*a*) Clinical Instruction in the Dispensary (FISHER, LANGNECKER). Monday, Tuesday and Thursday 10-11:30. Class limited to six. Fee $20.

(*b*) Lateral Curvature and the Technic of Orthopedic Apparatus (LANGNECKER). Two hours a week; hours to be arranged. Class limited to eight. Fee, $10.

(*c*) Growth and Development of Bone (FISHER). Two hours weekly. Class limited to five. Laboratory course. Fee, $10.

(*d*) Operative and ward clinics in the Lane Hospital on Friday at 10 a.m. Open to students in courses *a*, *b*, or *c* (LANGNECKER, FISHER).

14. Clinical Ophthalmology. (H. BARKAN) MTWThF 2-3; S 2-4
The class is limited to six. The work will consist of the study of clinical material from a diagnostic and therapeutic standpoint, with instruction in the use of the common methods of examination and treatment. Minor operations will be demonstrated and as far as possible performed by the class. The work Saturday afternoon will consist

of the demonstration of the usual operations on pigs' eyes and performance of same by the class, ending with lantern-slide demonstration of pathological anatomy of the eye. Fee, $35.

15. The Eye and General Medicine. (H. Barkan) MTWThF 5-6
(August 9th to 13th)
The class is unlimited. The work will consist of five illustrated lectures covering the eye conditions found in diabetes and nephritis, syphilis, syringomyelia, amaurotic family idiocy, hysteria, brain tumor, abscess, meningitis, and other intracranial conditons. Fee, $10.

16. Otology and Laryngology. (Wintermute, McNaught)
MTWThF 3-4
For a class of six. The work will include general clinical studies and demonstrations of routine cases, with especial consideration of the physiology and pathology of the middle ear and labyrinth by Dr. Wintermute, and the surgical anatomy of the nose and throat with specimens and operative demonstrations by Dr. McNaught. Fee, $35.

17. Genito-Urinary Surgery. (Hinman, Gedney) MWF 9-10
The class is limited to ten. The work will consist of routine clinical studies and demonstrations of cases and of operative clinics. Fee, $35.

Obstetrics and Gynecology

18. Obstetrics. (Moore) MF 2-3; two weeks' daily service
The class is limited to six. The work will consist of twelve talks on the theory and practice of obstetrics, with manikin demonstrations, together with two weeks' full time service in out-patient and hospital obstetrics, with daily talks and instruction. Fee, $25.

19. Gynecology. (Stephenson, Gibbons, Girard)
Out-patient Department, daily 10-11; Operating Room, TF 2; Laboratory, Th 2-4.
The class is limited to six. The work will include practical instruction in gynecological diagnosis, clinical studies and demonstrations of cases, medical treatment, operative demonstrations, and the study of gross and microscopical specimens of gynecological material. Fee, $35.

20. Cystoscopy. (Beasley) MWF 8-9
The class is limited to two sections of three students each; nine periods per section. The work will include demonstrations and practical instruction in cystoscopy, urethral catheterization, and methods of estimating renal function. Fee, $35.

21. Blood Vessel Surgery. (ROTHGANGER) M 4-5
The work will consist of six lectures, with demonstrations of Blood Vessel Surgery. For a class of three. Fee, $10.

22. Anaesthesia. (PALMER) W 4-5
Class limited to six. The work will consist of talks on the various anaesthetics with actual practice in the administration of the same under the supervision of Dr. Palmer. Fee, $25.

23. Pathology. (BAILEY) WF 4-5
The work will consist of discussions and demonstrations of specimens in selected subjects and clinical autopsies. Fee, $25.

24. *Experimental Study of Fractures and Dislocations.* (BLAISDELL) 2 hours a week
The class is limited to eight. The work is to be done on the cadaver and will include the production of fractures and dislocations involving the larger bones and joints. Fee, $50.

THE CURRICULUM

FIRST SEMESTER	Lec. hours	Lab. hours	Units of credit
Neurology—Gross and Minute Anatomy of the Brain and Spinal Cord	1	5	3
Histology	1	5	3
Gross Anatomy	1	9	4–5
Physiology—Muscle and digestion	2	5	4
Embryology		6	2
	5	30	16–17
SECOND SEMESTER			
Histology	1	5	3
Gross Anatomy	2	8	4–5
Physiology—Blood and circulation, respiration, nutrition, metabolism, nervous system, sense organs	2	10	6
Organic Chemistry	3		3
	8	23	16–17

THIRD SEMESTER (First Semester of Second Year)

Bacteriology	2	7	5
Gross Anatomy	2	9	5
Physiological Chemistry	3	9	6
	7	25	16

FOURTH SEMESTER (Second Semester of Second Year)

	Hours per week
Medicine	7
Clinical Pathology	3
Physical Therapeutics	2
Pharmacology and Materia Medica	6
Surgery	6½
Pathology	9½
	34

FIFTH SEMESTER (First Semester of Third Year)

Medicine	9
Clinical Pathology and Experimental Medicine	2½
Neurology	1
Pediatrics	2
Pharmacology and Materia Medica	3
Surgery	8
Surgical Pathology	2
Obstetrics	3
Pathology	4
	34½

SIXTH SEMESTER (Second Semester of Third Year)

Medicine	5
Clinical Pathology and Experimental Medicine	2½
Neurology	2
Pediatrics	5
Surgery	6
Surgical Pathology	2
Obstetrics and Gynecology	3
Pathology	4
	29½

SEVENTH SEMESTER (First Semester of Fourth Year)

Medicine	5
Pediatrics	2
Dermatology	1½
Legal Medicine	1
X-Ray	1
Psychiatry	1
Surgery	3
Orthopedic Surgery	2
Genito-Urinary Surgery	3
Eye, Ear, Nose, and Throat	4
Obstetrics	2
Gynecology	3
Hygiene	1
Thesis	4
	33½

EIGHTH SEMESTER (Second Semester of Fourth Year)

Medicine	6
Neurology	2
Dermatology	1½
History of Medicine	1
Dietetics	1
Surgery	4
Eye, Ear, Nose, and Throat	4
Obstetrics	2
Gynecology	3
Hygiene	1
Thesis	4
	29½

NINTH AND TENTH SEMESTERS—HOSPITAL YEAR

Clinical Examinations in Medicine, Surgery and Obstetrics.

I. DIVISION OF ANATOMY

ARTHUR WILLIAM MEYER, Professor.

EDGAR DAVIDSON CONGDON, Assistant Professor.

[The courses of study are as outlined under Anatomy, pp. 182-183.]

II. DIVISION OF BACTERIOLOGY AND IMMUNITY

WILFRED HAMILTON MANWARING, Professor.
HARRY JOHNSON SEARS, Instructor.

[With the co-operation of Dr. MARCUS CLAUDE TERRY, United States Public Health Service, San Francisco; Dr. HAROLD F. GRAY, Health Officer, Palo Alto; and Instructor JAMES IRA WILSON MCMURPHY, Department of Botany.]

[The courses of study are as outlined under Bacteriology and Immunity, pp. 183-184.]

III. DIVISION OF CHEMISTRY

JOHN MAXSON STILLMAN, ROBERT ECKLES SWAIN, Professors.
GUY CARLETON SWAN, Assistant.

1. Organic Chemistry.—A lecture course embracing a study of the classification, structural formulae, and properties of the more important compounds of carbon. The chemical relationships of the larger groups of organic compounds, alcohols, aldehydes, and ketones, acids, amines, and the halogen, sulphur, and nitrogen compounds will be emphasized, special attention being given throughout the course to those compounds which are of physiological and pathological interest. [Course *3a* in the Department of Chemistry.]

3 afternoons, 2d semester (SWAIN)

2. Toxicology.—A laboratory course, accompanied by informal lectures, dealing with the more important poisons, their physiological action and the prominent reactions employed in their identification. A search for the common poisons, based on a systematic scheme of analysis, will be made on artificially prepared materials. Course K*b* (Quantitative Analysis) or its equivalent is a prerequisite. Optional.

3 afternoons, 2d semester (SWAIN)

3. Physiological Chemistry.—A laboratory course including a preliminary study of the proteins, carbohydrates, and fats, and the action of the various digestive fluids upon them, followed by a chemical examination of the bile, blood, milk, the chief tissues of the animal body, and the excretions. This course should be preceded by the equivalent of Chemistry courses 1, *a*, and *k*.

3 afternoons, 3d semester (SWAIN)

4. Physiological Chemistry.—Lectures on the chemical composi-

tion and action of the tissues and secretions of the animal body, the digestion of foods, and the elimination of waste products. [Course 11 in the Department of Chemistry.]

3 units, 3d semester (SWAIN)

[Students enrolled as Medical students will be required to deposit $10 breakage fee for the laboratory course in Physiological Chemistry. Other University students will pay the usual fee of $25.]

IV. DIVISION OF HYGIENE AND PUBLIC HEALTH

†WILLIAM FREEMAN SNOW, Clinical Professor.
RICHARD G. BRODRICK, Assistant Clinical Professor.
WILFRED H. KELLOGG, Clinical Instructor.

1. Hygiene.—This course is divided as follows:

(*a*) Required reading, covering the usual information essential to an understanding of the principles of public health and hygiene;

(*b*) Lectures on organized public health work, covering the administration of federal, state, and local health departments (1st semester);

(*c*) Lectures on Medical Sociology, covering the activities of various types of welfare organizations (2d semester).

The practicing physician's duties and opportunities in the field of preventive medicine are emphasized and illustrated by field trips to quarantine stations and health departments.

1 hour, 7th and 8th semesters (BRODRICK, KELLOGG)

2. Public Health.—Research work for graduates, or for students registered as candidates for advanced degrees in the Medical Department, may be arranged in connection with investigations of the State Board of Health and the San Francisco Health Department. (BRODRICK, KELLOGG)

V. DIVISION OF MEDICINE

RAY LYMAN WILBUR (executive), JOSEPH OAKLAND HIRSCHFELDER (emeritus), Professors.

WILLIAM FITCH CHENEY, LANGLEY PORTER, ANDREW WILLIAM HOISHOLT, Clinical Professors.

THOMAS ADDIS, Associate Professor.

HARRY EVERETT ALDERSON, HAROLD PHILLIPS HILL, Associate Clinical Professors.

†Absent on leave, 1915-16.

Ernest Charles Dickson, Walter Whitney Boardman, Harold Kniest Faber, Assistant Professors.

Walter Frank Schaller, Henry Herbert Yerington, Assistant Clinical Professors.

George De Forest Barnett, Instructor.

William Redwood Price Clark, Morton Raymond Gibbons, Florence Mabel Holsclaw, George Dunlap Lyman, Arthur Aloysius O'Neill, Julian Mast Wolfsohn, Clinical Instructors.

Harry R. Oliver, Serologist, Lane Hospital.

William Louis Adams, William Wallace Behlow, Edmund Butler, Charles Henry Christal, Millicent Cosgrave, Maud Noble Haven, Anthony Huffaker, Thomas George Inman, William Kenney, Henry George Mehrtens, Alfred Cummings Reed, Chester Durbin Sewall, Roland Beatty Tupper, Assistants.

Subdivisons

PEDIATRICS	JURISPRUDENCE	ACTINOGRAPHY
NEUROLOGY	DERMATOLOGY AND SYPHILIS	TROPICAL MEDICINE
PSYCHIATRY	ELECTROTHERAPY	DIETETICS

The instruction in Medicine begins in San Francisco in the fourth semester, with practical work in Physical Diagnosis, with lectures and demonstrations in Physical Therapeutics, and with recitations in Medicine and laboratory work in Clinical Pathology. In the fifth and sixth semesters the general field of Medicine is covered by means of clinics, practical demonstrations, bedside instruction and clinical laboratory work. As far as feasible theoretical and didactic teaching is made secondary to demonstrations and individual work on the part of students. Four hours of the required work in Medicine may be taken in bedside instruction or in advanced work in the subdivisions of Neurology, Dermatology and Syphilis, or Pediatrics. During either the seventh or eighth semesters the student will, in the mornings, attend the clinics at the San Francisco Hospital. Therapeutics will be taught in immediate connection with Medicine.

1. Physical Diagnosis and Introduction to Medicine.—This course lays the foundation for the work in Medicine, and consists largely of practical instruction in the methods of physical diagnosis and in history taking, and in work upon the principles of medicine.

7 hours, 4th semester

(Wilbur, Addis, Boardman, Barnett, Dickson, Reed)

2. Clinical Pathology.—A laboratory period of three hours per week, with some lectures, in microscopical and clinical diagnosis, including the methods of examining blood, urine, sputum, gastric contents, feces, etc.

3 hours, 4th semester (BARNETT)

3. Physical Therapeutics.—In this course is given a practical discussion, with demonstrations, of various methods aside from drugs, for the treatment of disease, with particular reference to the physiological problems involved. Hydrotherapy, Balneotherapy, Climatology, Electrotherapy, Bier's Hyperaemia, Gymnastics, and Massage are considered. The technique of venesection, hypodermoclysis, transfusion, etc., is demonstrated.

2 hours, 4th semester (ADDIS, BARNETT, BOARDMAN, DICKSON)

4. Experimental Medicine and Clinical Pathology.—Throughout a year the third-year class spends two and a half hours per week in laboratory work in Experimental Medicine with demonstrations of pathological physiology, and in advanced Clinical Pathology.

2½ hours, 5th and 6th semesters

(ADDIS, BARNETT, BOARDMAN, DICKSON)

5. Medicine: Section Work and Clinics.—Four mornings per week two hours are spent by students in the outpatient department or wards in practical medical work and in attending clinics and recitations.

8 hours, 5th semester

(WILBUR, CHENEY, ADDIS, BOARDMAN, DICKSON)

6. Medicine: Clinics.—Four hours per week of bedside instruction in the wards of Lane Hospital.

4 hours, 6th semester (WILBUR, CHENEY, ADDIS, BOARDMAN)

7. Medicine: Set Clinic.—Once a week a set clinic for the third- and fourth-year students is given at Lane Hospital.

1 hour, 5th, 6th and 7th, or 8th semesters (WILBUR)

8. Medicine: Ward Work (Lane Hospital).—This consists of four hours per week of bedside work in Lane Hospital. [The senior class is divided into two sections. Section I is assigned to Lane Hospital for the 7th semester, and Section II for the 8th semester.] Instead of this course four hours in Medicine 11, 15, 21, 24 may be taken at the option of the student.

4 hours, 7th or 8th semesters (WILBUR, CHENEY)

9. Medicine: Ward Work and Clinics (San Francisco Hospital).—Five hours are given to bedside instruction and there is a set Medical

clinic on Saturday forenoon. [The senior class is divided into two sections. Section II is assigned to the San Francisco Hospital for the mornings of the 7th semester, Section I for the 8th semester.]

6 hours, 7th or 8th semesters (HILL)

10. Actinography.—Practical instruction in the Roentgen-Ray laboratory of Lane Hospital including Radio-Therapy and plate interpretation.

(I) 1 hour, 7th semester; (II) 1 hour, 8th semester (BOARDMAN)

11. Actinography.—Advanced course upon the technique of Roentgen-Ray examinations, with a clinical study of patients from the standpoint of X-Ray examinations.

2 hours, 7th or 8th semester (optional) (BOARDMAN)

12. Diseases of the Nervous System.—Recitations and demonstrations in the outpatient clinic.

1 hour, 5th semester (SCHALLER)

13. Neurology.—Recitations and clinical work in Lane Hospital and the outpatient department.

2 hours, 6th semester (SCHALLER)

14. Neurology (San Francisco Hospital).—Two hours per week are assigned for the clinical study of the neurological cases in the Stanford wards at this hospital.

(I) 2 hours, 7th semester; (II) 2 hours, 8th semester (WOLFSOHN)

15. Neurology.—Advanced work in the outpatient department, laboratory and hospitals, for students who have had courses 12 and 13 or their equivalent. Optional.

2 to 4 hours, MWTh mornings (SCHALLER)

16. Psychiatry.—A weekly lecture and clinic upon Mental Diseases.

1 hour, 7th semester (HOISHOLT)

17. Psychiatry.—Advanced lectures and clinics upon Mental Diseases. Optional.

1 hour, 8th semester (HOISHOLT)

18. Pediatrics.—Recitation and clinical work in the outpatient department.

2 hours, 5th semester

(FABER, YERINGTON, LYMAN, HUFFAKER, HOLSCLAW)

19. Pediatrics.—Recitations covering the general field of Pediatrics, and clinical work in the outpatient department and in Lane Hospital.

5 hours, 6th semester (PORTER, FABER, YERINGTON)

20. Pediatrics.—Clinical work in Lane Hospital.

2 hours, 7th semester (PORTER, YERINGTON, HOLSCLAW, LYMAN)

21. Pediatrics.—Advanced work in the outpatient clinic and in Lane Hospital. Optional.

2 to 6 hours, MWTh mornings (PORTER, YERINGTON, HOLSCLAW)

22. Dermatology and Syphilis.—A weekly clinical demonstration in Lane Hospital or the outpatient department, with a study of the Histopathology of the skin.

1½ hours, 7th semester (ALDERSON)

23. Dermatology and Syphilis.—A clinic once a week, with demonstrations upon diseases of the skin.

1½ hours, 8th semester (ALDERSON)

24. Dermatology and Syphilis.—An advanced course for seniors and physicians. Optional.

2 to 6 hours, 7th or 8th semesters (ALDERSON)

25. History of Medicine.—In association with other Divisions a weekly lecture or recitation will be held. The aim will be to have each Division present that portion of the history of medicine in which it is most interested. The students will be assigned a certain amount of journal and other preparatory work. 1 hour, 8th semester

(OPHÜLS, STILLMAN, SPALDING, WILBUR)

26. Dietetics.—A recitation and lecture course of one hour per week.

1 hour, 8th semester (WILBUR)

27. Jurisprudence.—The instruction in this course will be divided among the various Divisions, each one covering the points most essential to it. During 1914-15 lectures in this course were delivered by Professors CATHCART, HUSTON, CHEADLE, and WOODWARD of the Stanford Law Department.

1 hour, 7th semester (DICKSON)

28. Metabolism.—A course for senior students and others with equal preparation, in the practical study of metabolism. Optional.

4 to 8 hours, 7th semester (ADDIS)

29. Experimental Medicine.—Well equipped laboratories for medical research are available to capable students. The facilities of the wards and the dispensary may be used in association with the work. Optional

(WILBUR, ADDIS, BOARDMAN, DICKSON)

30. A Special Course will be offered to well trained physicians in the laboratories and the dispensaries and hospitals. Such students may register for advanced degrees, or as "Special Workers."

(WILBUR, ADDIS, DICKSON)

31. Practical Therapeutics and Prescription Writing.—An optional course open to fourth-year medical students, including exercises in prescription writing and in the practical care of patients.

1 hour, 7th semester (WILBUR)

Courses 1 to 7, 9, 10, 12, 13, 14, 16, 18, 19, 20, 22, 23, 25, 26, and 27 are required of all candidates for the degree of Doctor of Medicine. In addition four hours are required in any of the following courses: 8, 11, 15, 17, 21, 24, 28.

VI. DIVISION OF OBSTETRICS AND GYNECOLOGY

ALFRED BAKER SPALDING, Professor.
GEORGE BURBANK SOMERS, Clinical Professor of Gynecology.
HENRY AUGUSTUS STEPHENSON, Assistant Professor.
SHADWORTH OLDHAM BEASLEY, HENRY WALTER GIBBONS, FRANK ROBERT GIRARD, CHESTER BIVEN MOORE, Clinical Instructors.
JOSEPH RICHARD BROWN, Assistant.

The Women's Clinic treats annually over 1000 new patients suffering from all varieties of ailments peculiar to women, and in addition provides for over 500 confinements. This material furnishes an exceptionally good opportunity for practical instruction in the physiology and pathology of the female genital tract. Students attend personally from ten to fifteen cases of confinement in the Outpatient Obstetrical service.

1. Obstetrics and Gynecology.—Recitations and discussions. For the greater portion of the year the general principles of obstetrics are taken up. During the latter part of the second semester the more essential pathological conditions of Gynecology are considered. Students read from text-books certain assigned topics and discuss with the instructor these subjects. The topics for discussion are illustrated with pathological specimens, clinical histories, manikin demonstrations, etc.

2 hours, 5th and 6th semesters (SPALDING)

2. Histology, Ward Rounds, Manikin Exercises.—The class is divided into sections for bedside instruction and practical instruction in all the obstetrical exercises on the manikin. For a part of the year the entire class is instructed in the histology of the female genital tract and the more common pathological variations.

1 hour, 5th and 6th semesters (SPALDING, STEPHENSON)

3. Practical Obstetrics.—For periods of two weeks, the senior student is detailed for his entire time as assistant on Out-patient Obstetrics. During this period he takes histories, examines ante-partum and post-partum patients, attends out-patients in labor, assists the interne with ward patients in labor, witnesses operations, makes daily rounds in the hospital wards, visits the home patients during the puerperal period, and is responsible for certain routine laboratory work.

4 hours, 7th or 8th semester (SPALDING, STEPHENSON)

4. Practical Gynecology.—In this course instruction in history taking, pelvic examinations, cystoscopic examinations, and non-operative treatment in the dispensary is alternated with instruction in the operating room and ward rounds.

2 hours, 7th and 8th semesters (SPALDING, STEPHENSON)

5. Gynecology—Clinical Conference.—Members of the senior class present in rotation papers based on a study of clinical histories, and a resumé of the literature bearing upon the subject under consideration. These papers are discussed by the class.

1 hour, 7th and 8th semesters (SPALDING, STEPHENSON)

6. Special Courses in Cystoscopy, in Gynecological Diagnosis, and in Practical Obstetrics, will be arranged for individual students. The laboratory of Obstetrics and Gynecology is open throughout the year to properly qualified students who wish to do experimental work in Obstetrics and Gynecology.

VII. DIVISION OF PATHOLOGY

WILLIAM OPHÜLS, Professor.
CHARLES HERVEY BAILEY, Assistant Professor.
JEAN REDMAN OLIVER, Instructor.

1. General Pathology.—A course of lectures, demonstrations, and laboratory work which, following a general introduction into the field of Pathology, covers disturbances in circulation, regressive and progressive tissue changes, inflammation, and tumors. The study of human material will be supplemented by experiments. Two lectures and three laboratory periods of two and a half hours per week.

4th semester (OPHÜLS, BAILEY, OLIVER)

2. General Pathology.—An elective course of weekly recitations covering the same ground as course 1. Elective.

1 hour per week, 4th semester (BAILEY)

3. Special Pathology.—A course of demonstrations of fresh and preserved, gross and microscopic specimens illustrating selected chapters of Gross Morbid Anatomy. Part of the time will be devoted to the technique of post-mortem examinations. Diagnostic work will be done in the 6th semester.

4 hours per week, 5th and 6th semesters

(Ophüls, Bailey, Oliver)

4. Advanced Work in Special Pathology.—An elective course in Special Pathology is offered to students who have taken course 1. Students taking this course will assist at necropsies whenever possible. They are required to work up the histological or bacteriological problems connected with the necropsies which they attend. For this work they will be given the facilities of the laboratory. A deposit of $5 is required to cover such material as is used by the students. Such part of this as is not drawn against will be refunded at the end of the semester. (Ophüls, Bailey)

5. Experimental Pathology.—An elective course open to students who have completed General Pathology (course 1). In this course infectious diseases will be taken up from an experimental point of view, and special attention will be given to those which are common to man and animals, or which may produce lesions in animals. Students will have an opportunity to watch the development of such diseases in animals, and the lesions will be studied at autopsy. Methods in common use for the diagnosis of infectious diseases by means of laboratory experiments will be taken up.

2 hours per week, one semester (Bailey)

6. Research Work in the Pathological Laboratory.—Students wishing to do special work in the Pathological Laboratory should have finished course 1. They should consult with the executive of the Division in regard to the selection of a proper subject for investigation. As the laboratory accommodations are limited, students must do a reasonable amount of work, otherwise the privilege will be withdrawn. A deposit of $10 will be required to cover such material as is used by the student in the course of his work. Such part of this as is not drawn against will be refunded on the completion of the work undertaken. Work may be undertaken during the summer vacation. The same regulations apply to work on theses or for advanced degrees in the Division, except that in the latter case the student also should have finished course 3.

(Ophüls)

VIII. DIVISION OF PHARMACOLOGY

Albert Cornelius Crawford, Professor.
Walter K. Watanabe, Marjorie G. Foster, Assistants.

1. Pharmacology and Materia Medica.—In the course in Pharmacology emphasis is placed on laboratory work. This requires three hours weekly during the fourth semester. In this course the student performs for himself, or has demonstrated to him by the other members of the class, the important experiments which illustrate the fundamental principles of pharmacology, and sees one or more experiments on all of the more important drugs. The relation of the laboratory work to rational therapeutics is constantly kept in mind. The lecture course embraces two hours weekly during the fourth semester, with one weekly conference or demonstration. During the fifth semester the work consists of lectures and recitations. In connection with the course in Pharmacology a short course in prescription writing is given.

(*a*) 6 hours, 4th semester; (*b*) 3 hours, 5th semester.
(Crawford)

2. Graduate Course.—The laboratory is open throughout the year to properly qualified students who wish to carry on independent work in Pharmacology.
(Crawford)

3. Pharmacy.—A short optional course of demonstrations in pharmacy will be given. This will enable the student to understand better the advantages and dangers of combining drugs.
(———)

IX. DIVISION OF PHYSIOLOGY

Oliver Peebles Jenkins, Frank Mace McFarland, Professors.
Clara S. Stoltenberg, Associate Professor.
James Rollin Slonaker, Frank Walter Weymouth, Assistant Professors.

1. Physiology of Muscle and Digestion.—An experimental course covering the ground represented in Foster's Physiology, or Howell's Text-book on the same subjects. (Two lecture and five laboratory hours per week.) [Course 2 in the Department of Physiology and Histology.]

4 units, 1st semester (Jenkins, Slonaker)

2. Physiology of Blood and Circulation, Respiration, Elimination of Wastes, Metabolism, and Nutrition.—Follows course 1. An experimental course, covering the ground represented in Howell's Text-book. (One lecture and five laboratory hours per week.) Course 3 in the Department of Physiology and Histology.]

4 units, 2d semester (JENKINS, SLONAKER)

3. Structure of the Nervous System.—The course consists of the dissection and comparative study of a series of vertebrate brains, including the human brain and cord, also the peripheral nervous system; abundant material is provided, also such necessary helps as the latest models and charts. For texts the student will use Quain, Edinger, and Barker. (One lecture and five laboratory hours per week.)

3 units, 1st semester (STOLTENBERG)

4. Anatomy and Histology of the Sense Organs.—The course is planned to accompany course 3, the two being designed to give the gross and minute anatomy of the central nervous systems and sense organs. The texts necessary for the student's use are Quain and Barker. (One lecture and five laboratory hours per week.)

3 units, 2d semester (STOLTENBERG)

5. Histology.—The study of the structure of the cell and its modes of reproduction, the epithelial, muscular, nervous, and connective tissues, and the outline of their development in a comparative way, occupy the first semester. During the second semester the structure of the blood and lymph, and the microscopic anatomy of the organs, are dealt with. Text required: Quain-Schäfer's Microscopic Anatomy. Elementary histological technique is taught during the course. In the second semester an opportunity is offered for a limited number of students to register for an extra unit, which is devoted to more extended histological technique. Prerequisite for course 5, course 1 or its equivalent. (One lecture and five laboratory hours per week.)

3 units, both semesters (MCFARLAND)

6. Physiology of the Nervous System and Sense Organs.—An experimental course in these subjects, designed to follow courses 3 and 4. Texts: Foster, Howell's Text-book. (One lecture and five laboratory hours per week.) [Course 6 in the Department of Physiology and Histology.]

3 units, 2d semester (JENKINS)

7. Journal Club.—Students in the advanced classes will be expected to meet once a week to discuss current literature in Physiology and Histology. [Course 14 in the Department of Physiology and Histology.]

1 unit, 2d semester (DEPARTMENT FACULTY)

8. Advanced and Research Courses in Physiology and Histology are open to those who are qualified to take them up.

X. DIVISION OF SURGERY

Stanley Stillman (executive), Adolph Barkan (emeritus), Emmet Rixford, Professors.

Leonard W. Ely, Associate Professor.

Rufus Lee Rigdon, Albert Brown McKee, Edward Cecil Sewall, Clinical Professors.

Frank Ellsworth Blaisdell, *Leo Eloesser, Assistant Professors.

Harrington Bidwell Graham, Assistant Clinical Professor.

John Francis Cowan, Instructor.

Hans Barkan, James Eaves, Harvard Young McNaught, George Rothganger, Francis Thomas Williams, George Preston Wintermute, Clinical Instructors.

Caroline Palmer, Anaesthetist, Lane Hospital.

Howard Felix Adler, John Robert Burrows, James Root Dillon, Arthur Lawrence Fisher, Ross Wallace Harbaugh, Sylvan Lewis Haas, Clarence Elmer Hyde, Josiah H. Kirk, Harry Leslie Langnecker, William O. Montgomery, Harold Staats Moore, Allan Earle Peck, Dexter Newell Richards, Melville Erskine Rumwell, Edmund D. Shortlidge, Chester Howard Woolsey, Assistants in Clinic.

Subdivisions

OPHTHALMOLOGY GENITO-URINARY DISEASES ORTHOPEDICS
OTOLOGY, RHINOLOGY, AND LARYNGOLOGY

Instruction in Surgery begins in the fourth semester, with recitations and demonstrations in General Surgery, *i. e.*, the principles of surgery, surgical pathology, and the surgical diseases, together with recitations and demonstrations in fractures and dislocations. The systematic textbook and lecture work in Regional Surgery is completed in the sixth semester. As far as possible clinical demonstrations will take the place of formal lectures. The work of the seventh and eighth semesters is essentially clinical, the general field being covered by means of clinics, practical demonstrations, bedside instruction, individual clinical investigation, and work in the laboratory of Surgical Pathology.

*Absent on leave.

1. General Surgery (Surgical Pathology and Principles of Surgery).—Recitations, demonstrations, and laboratory work, utilizing clinical and pathological material from the outpatient clinics and Lane Hospital, and preparations from the museum and laboratory of Surgical Pathology.

2½ hours, 4th semester (STILLMAN, COWAN)

2. Fractures and Dislocations.—Recitations, study of X-Ray plates, and demonstrations of fractures and dislocations. All the important fractures and dislocations are produced on the cadaver and subsequently demonstrated by dissection.

2 hours, 4th semester (ELY, BLAISDELL, COWAN)

3. Regional Surgery.—Recitations and demonstrations in diseases of the extremities and certain affections of the head and neck.

2 hours, 4th semester (COWAN)

4. Regional Surgery.—Recitations, demonstrations, and discussions on diseases of the abdomen.

3 hours, 5th semester (STILLMAN)

5. Regional Surgery.—Recitations, demonstrations, and discussions on diseases of the head, neck, and thorax not included in course 3, with special attention given to the surgery of the brain and spinal cord.

2 hours, 6th semester (RIXFORD)

6. Surgical Pathology.—A laboratory course in which surgical problems are considered from the standpoint of Pathology. Special attention is given to the study of tumors and gross specimens from the out-patient clinic and hospital operating rooms.

2 hours, 5th and 6th semesters (COWAN, BLAISDELL, ELY)

7. Surgical Clinics and Section Work.—In this course operative clinics are given twice a week in the amphitheatre, quizzes and demonstrations in the out-patient clinics, and bedside instruction and history taking in the surgical wards of Lane Hospital. As far as practicable the operative clinics are limited to cases which have been previously studied by the student either in the medical or surgical wards or in the out-patient clinics. *Anesthetics.*—In connection with the clinical work the students are assigned in rotation so that each one shall administer ten anesthetics under the supervision of Dr. Carolyn Palmer, the anesthetist at Lane Hospital. Dr. Palmer also gives a course of four lectures on the administration of anesthetics.

5 hours, 5th semester; 4 hours, 6th semester

(STILLMAN, COWAN, ROTHGANGER)

8. Surgery: Ward Works and Clinics.—Out-patient Clinics and Lane Hospital. (The senior class is divided into two sections. Section I is assigned to Lane Hospital for the mornings of the 7th semester, and Section II for the mornings of the 8th semester.) Formal clinics are given once per week. Senior students are privileged to assist in operations and in the dressing of cases both in the out-patient clinics and hospital wards. One hour per week of this course may be devoted to courses 13, 14, 15, 16, 17, 18, at the option of the student.

3 hours, 7th or 8th semester (STILLMAN)

9. Surgery: Ward Work and Clinics.—San Francisco Hospital—(Section II of the senior class is assigned to the San Francisco Hospital for the mornings of the 7th semester and Section I for the mornings of the 8th semester.) Three hours per week are spent either in the wards or operating room, and there is a set surgical clinic once per week. One hour per week of this course may be devoted to optional courses in Surgery.

4 hours, 7th or 8th semester (RIXFORD, RUMWELL, HARBAUGH)

10. Ophthalmology.—Demonstrations, lectures, recitations, and clinics. This course covers in a practical way the general field of diseases of the eye. Instruction is given in the use of the ophthalmoscope, perimeter, etc. Operations are performed both in Lane Hospital and the outpatient clinic.

2 hours, 7th and 8th semesters (MCKEE, BARKAN)

11. Otology, Laryngology, and Rhinology.—Demonstrations, recitations, and clinics. The diseases of the ear, nose, and throat are covered in a general way, and the practical use of the important diagnostic instruments is taught. Operations are performed both in the amphitheatre and in the outpatient clinic.

2 hours, 7th and 8th semesters

(SEWALL, GRAHAM, WINTERMUTE, MCNAUGHT)

12. Genito-Urinary Surgery.—Recitations, quizzes, and clinics.—This course includes practical work in the out-patient clinic and training in the use of the urethroscope and cystoscope. Special attention is devoted to investigation of the upper urinary tract. Operative clinics are held once a week.

3 hours, 7th or 8th semester (RIGDON, WILLIAMS)

13. Orthopedic Surgery.—Clinics and demonstrations. This course covers the general field of Orthopedic Surgery, and is given in Lane Hospital and in the outpatient department.

2 hours, 7th or 8th semester (ELY)

14. Operative Clinic.—An operative clinic for senior students and qualified physicians is held once per week. Optional.

2 hours, 7th and 8th semesters (STILLMAN)

15. Out-patient Clinics.—In this course opportunity is afforded senior students and qualified physicians of examining cases and of doing dressings, bandaging, and minor operations in the outpatient clinic under instruction of the Assistants. Optional.

Three mornings per week, 7th and 8th semesters

(ROTHGANGER, HYDE, RICHARDS, ADLER)

16. Operative Surgery.—A course of operative surgery on the cadaver in which the student performs or assists in performing most of the classical surgical operations. Optional.

7th or 8th semester (EAVES)

17. Refraction.—A practical course in Physiological Optics and Refraction open to senior students and physicians. Optional.

1 hour, 7th or 8th semester (MCKEE)

18. Advanced Ophthalmology.—Clinical work in the Outpatient Clinic and Lane Hospital open to senior students and physicians. Optional.

2 to 6 hours, 7th or 8th semester (MCKEE)

19. Advanced Otology, Laryngology, and Rhinology.—Clinical instruction for advanced students, including surgical operations. Optional.

2 to 4 hours, 8th semester (SEWALL, GRAHAM, MCNAUGHT)

In connection with the above course, through the co-operation of the various clinics and laboratories, opportunity is offered advanced students and physicians to make a special study of functional testing of the ear, tubercular lesions of the larynx, anatomy of the ear, nose, and throat, special bacteriology of the upper respiratory tract, Roentgen Ray diagnostic methods, and of performing operations upon the cadaver.

(SEWALL, GRAHAM, WINTERMUTE, MOORE, BLAISDELL, DICKSON, BOARDMAN)

20. Special courses will be offered to well trained physicians in the laboratory of Surgical Pathology and in the out-patient clinic and hospitals. Such students may register for advanced degrees or as Special Workers.

(STILLMAN, RIXFORD, BLAISDELL, ELY, COWAN)

MARINE BIOLOGICAL LABORATORY

Professors Charles Henry Gilbert and Oliver Peebles Jenkins
Directors.

The Laboratory buildings are located at Pacific Grove, two miles west of Monterey, and stand on a low bluff immediately facing the sea. They consist of two two-story structures capable of accommodating about eighty students, and contain four general laboratories, one lecture-room, seventeen private rooms for special investigators, and a dark-room for photography. They are provided with running water, both salt and fresh, and ample provision is made for individual aquaria. The library and apparatus of the University are available for use in the Laboratory.

Session of 1915

Professor George Clinton Price, Instructor in Charge.

The Twenty-fourth Session extended over a period of six weeks, beginning May 24th and closing July 3d.

Courses of Instruction

1. **General Zoology.**—An elementary course open to all students and to teachers and others who desire an acquaintance with the anatomy and life-history of marine animals, and with the methods pursued in laboratory study. One lecture a day, the remainder of each day being spent in the laboratory or on the collecting grounds under the immediate direction of the instructor. This course is accepted by the Department of Medicine as satisfying the preliminary biological requirement for admission to the work of that department.

2. **General Embryology.**—A laboratory course in the general principles of the development of Invertebrate and Vertebrate forms, supplemented by lectures and assigned reading, and including the histogenesis of the reproductive cells, the maturation, fertilization, and early cleavage of the egg, and the formation of the germ layers, larval stages, and the early development of one or more Vertebrates. Open to students who have had at least a year's work in Zoology or Physiology.

Registration

The sessions of the Marine Biological Laboratory constitute an integral

part of the biological work of Stanford University. Students register for this work at Pacific Grove at the beginning of the session, and receive upon its successful completion five units of University credit.

Expenses

A laboratory fee of $25 is payable in advance. To investigators prepared to carry on original work, the use of the laboratory is tendered free of charge. Applicants for these privileges are expected to satisfy the directors as to their preparation for such work. Pacific Grove is well supplied with boarding accommodations with a considerable range in price, and also with cottages furnished for housekeeping. Students pay on an average about one dollar per day for room and board. Some small groups of students form clubs, rent cottages, and manage their own housekeeping, thus reducing their living expenses.

UNIVERSITY LIBRARY

George Thomas Clark, Librarian.
Helen Binninger Sutliff, Chief Cataloguer.
Alice Newman Hays, Reference Librarian.
Charles V. Park, Chief of Loan Desk.
Elizabeth Hadden, Chief of Order Department.
Lucia May Brooks, Chief of Serial Department.
Louise Ophüls, Medical Librarian.
Frederick Edward Brasch, Law Librarian.

The Library is housed in the Thomas Welton Stanford Library Building, which forms the central portion of the easterly half of the outer quadrangle façade. On the main floor are the general reading rooms, with accommodations for 220 readers, the reference room, serial room, and catalogue room. On the second floor are six seminary rooms, used exclusively by the Departments of Economics, English Literature, Germanic Languages, Greek, Latin, and History.

The Library is open during term time on week days from 8 a.m. to 10 p.m., except on Saturdays, when it is closed at 5:00 p.m. During vacations the hours are from 8:30 a.m. to 4:30 p.m., Saturdays to 12:30 p.m. The shelves are open to members of the faculty, and to students engaged in advanced work upon the recommendation of their instructors. Books, other than works of reference, not required for class use, are lent for a period of two weeks.

Including the departments of Law and Medicine the Library contains upward of 273,000 volumes. The income of the Jane Lathrop Stanford Jewel Fund, certain other special funds, and fees provide amply for its maintenance and growth. Noteworthy special collections are as follows:

The Jordan Library of Zoology.—A collection consisting largely of works on ichthyology, to a considerable extent made up of a vast number of authors' separates, which have been accumulated by Chancellor Jordan, bound in convenient form, indexed, and catalogued. The more voluminous publications, such as the works of Cuvier, Lacépède, Bloch, Bleeker, Gunther, and others, are well represented. These, supplemented by the proceedings of various societies and institutions, make a collection of books of great value to advanced students and investigators in ichthyology. The library is conveniently arranged, and is situated in the Zoology building near the laboratories and collections.

The Barbara Jordan Library of Birds.—A memorial collection presented by Chancellor Jordan, and to which frequent additions are made. While some of the older texts are not represented, it is a good working library of ornithology and contains the principal modern works on the subject.

The Hopkins Railway Library.—A collection of approximately 10,000 volumes and pamphlets dealing with the subject of transportation. In 1892 Mr. Timothy Hopkins, of San Francisco, presented to the University his private library on railroads, consisting of about 2,000 books, personally providing for its maintenance and growth for many years. At present there is an annual library appropriation for this purpose. The collection is shelved by itself in one of the seminary rooms. It is general in scope, intended to embrace all subjects touching on the building, maintenance, and operation of railways. It is especially rich in state and government reports, as well as in reports of individual railroads both in the United States and Europe, with much material pertaining to their history.

The Hildebrand Library.—In 1895 the University acquired the library of the late Professor Hildebrand, of Leipzig, containing more than 5000 volumes and pamphlets relating largely to Germanic languages and literature, the seventeenth and eighteenth centuries being especially well represented, and including also a notable collection of three hundred old dictionaries. The value of the books is greatly enhanced by the manuscript notes of Professor Hildebrand.

The Flügel Collection, which formed the more important part of Dr. Flügel's library, was purchased in 1915 and embraces about 4,000 volumes. It includes copies of the 15th century editions of Vincent of Beauvais, a number of important and rare 16th century writers (e. g., Ball's Catalogus, 1557-9; Luther, 1539-59; More, 1557; Holinshed, 1586), and a good many 17th century 4tos and folios (Islip's Chaucer, Selden, Browne, Stow, etc.). The history of philology is well illustrated (Spelman, Junius, Hicks, et al.). The library has now a solid foundation in these fields and can supply a large amount of material for the study of certain aspects of the 16th and 17th centuries that could not formerly be attempted.

The Thomas Welton Stanford Australasian Library.—A good working collection of books relating to Australia and New Zealand. It is especially rich in early voyages, travels, and descriptions. Several hundred volumes of parliamentary reports of the Australian states, the Commonwealth, and New Zealand, are included. The publications of learned societies, such as the Royal Societies of New South Wales and Victoria, the Australian Museum, and the New Zealand Institute, are well represented, while considerable pamphlet material also is available.

British Parliamentary Papers.—An unusually complete set of British government documents from 1801 to date, some 6500 volumes, of which the first 3500 volumes constituted a special gift to the Library, made by Mrs. Stanford in 1900. The set contains not only the full papers laid before Parliament from the customary departments of government, such as diplomatic, colonial, and financial papers, but also the most valuable reports of the special committees and royal commissions, offering material for research in almost every field of knowledge. Taken in connection with the University's excellent set of United States Documents, and of the governmental publications of Canada, and of Australasia, the collection offers unusual facilities for study in the public undertakings of English-speaking peoples.

The Jarboe Collection on the French Revolution.—Acquired in 1910. It contains original materials, principally in French, relating to the Revolutionary and Napoleonic era. Two features of the collection are of particular interest to advanced students of history—the original and contemporaneously printed pamphlets, of which many are unusual; and the memoirs, of which there is a comprehensive selection.

The Lane Medical Library.—Founded by the directors of Cooper Medical College in accordance with the bequest of Mrs. L. C. Lane. The Library contains about 40,000 volumes, and is particularly rich in

its collection of medical and allied periodicals. The leading domestic and foreign journals are currently received. The new library building, erected in 1912, is a fireproof structure of Colusa sandstone, and is located opposite the other medical buildings, on the corner of Sacramento and Webster streets, San Francisco.

The Branner Geological Library.—The Geological Library (room 333) is the result of twenty-five years of painstaking acquisition by Dr. John Casper Branner. It includes a vast wealth of material relating to geology, paleontology, mineralogy, geography, mining and metallurgy. It is especially well equipped with files of journals and the transactions of scientific societies, together with a large collection of state and government reports. This library was acquired by the University in 1914. Information as to its journals and other sets is available at the Reference desk.

THE MEMORIAL CHURCH

The Rev. David Charles Gardner, Chaplain.
Louis H. Eaton, Organist.

Morning prayers are said daily at 8 a.m., followed by a short address. In this service students take part. Divine service is held on Sunday morning at 11 o'clock.

The following named clergymen have been invited by the Chaplain to occupy the pulpit for one Sunday each during 1915-16:

Dr. John H. Macdonald, Toronto, Presbyterian.
The Rev. Caleb L. Dutton, San Francisco, Unitarian.
Rabbi Stephen S. Wise, New York, Hebrew.
Dean Gresham, San Francisco, Episcopalian.
The Rev. Robert Freeman, Pasadena, Presbyterian.
Dean MacCormack, Los Angeles, Episcopalian.
The Rev. Paul Smith, San Francisco, Methodist.
The Rev. Horace Day, Los Angeles, Congregationalist.

The following clergymen have been invited as special preachers in Memorial Church and lecturers in the University, each for a period of three weeks.

Dr. William Pierson Merrill, Brick (Presbyterian) Church, New York City.
Dr. Albert Parker Fitch, President Andover Theological Seminary, (Congregationalist), Cambridge, Mass.
Dr. Francis Greenwood Peabody, Harvard University, (Unitarian).

UNIVERSITY CHOIR

Louis H. Eaton, Organist and Director.

The Choir sings at the morning service each Sunday in Memorial Church, the music consisting of anthem, chant, and hymns.

Rehearsal Th 7:35 1 unit of credit per semester

During the second semester a larger separate choir is formed for the performance of one of the great oratorios,—in 1915-16, Mendelssohn's "Elijah."

Rehearsals as arranged 1 unit of credit

LECTURES, RECITALS, LITERARY CONTESTS, HONORS, AND CLUBS

University Assemblies

UNIVERSITY Assemblies are held at intervals, averaging about once a fortnight, during the regular hours of instruction. All university classes are suspended during the Assembly hour. In addition to a number of Student Assemblies, the following speakers and subjects have been represented in 1915-16:

September 7.—(1) Annual Address to the Entering Class: President Branner; (2) The Reluctant Student: Professor Edward Capps, of Princeton University.

January 21.—Address to Students, by President Ray Lyman Wilbur.

February 23,—Belgian Relief Work: Professors Kellogg and Seward.

Lectures

Presented by the University or under the auspices of various societies and clubs.

September 14.—Our World Relationships: Professor William Howard Taft, of Yale University.

September 15.—Intellectual Relations between Argentine and the United States: Dr. Ernesto Nelson, of the University of La Plata.

October 19.—A Proposal for a World Legislature: Dr. Henri La Fontaine, of Belgium.

November 16.—The Truth About Serbia: Lieut. M. Swartzkopensky.

December 5.—Readings from his own poems: Mr. Alfred Noyes, of England.

January 17, 18, 19.—(1) What Religion can do for Educated Men and Women, (2) The Exceeding Difficulties of Belief, (3) The Religious Instinct and the Christian Experience: President Albert Parker Fitch, of Andover Theological Seminary.

Conference on International Peace

September 6, 7, 8, 9, 10.—The Place of Physical Force in Modern Civilization; Problems of National Defense; Is Our Country Pre-

pared?; Social and Biological Aspects of War; Japanese-American Relations; Has International Law Failed?; Pan-American Relations and the Monroe Doctrine; Partriotism, Militarism, Imperialism, and Democracy; Conditions of a Permanent Peace: addresses by Chancellor JORDAN, Professor P. A. MARTIN, Dr. ICHIHASHI, and Dr. VANN, of the University, Dr. JOHN MEZ, of New York, and Mr. LOUIS P. LOCHNER, of Chicago.

PACIFIC COAST BRANCH OF AMERICAN HISTORICAL ASSOCIATION

November 26, 27.—(1) Polk's Part in the Jackson Administration: Professor EUGENE I. MCCORMAC, of the University of Oregon; (2) The Birthday of a California Pioneer, a Sketch of the Life and Work of Cornelius Cole: Professor ROCKWELL D. HUNT, University of Southern California; (3) Rudolf Schleiden and the Visit to Richmond, April 25, 1861: Dr. RALPH H. LUTZ; (4) The Relation between High School History and Freshman History: Mrs. EDITH JORDAN GARDNER, of Berkeley; (5) Freshman History at the University of California: Mr. EVERETT S. BROWN, of the University of California; (6) Present Tendencies in the Teaching of History: Professor ARLEY B. SHOW; (7) Some Problems of the History Teacher: Professors W. SCOTT THOMAS and IRA B. CROSS, of the University of California, and Miss CATHERINE L. FIELDS, of the Lodi High School; (8) The Presidential Address: Professor HERBERT E. BOLTON, University of California.

COSMOPOLITAN CLUB

September 13, 1915.—(1) Relation of the Cosmopolitan Club to International Peace: Dr. DAVID STARR JORDAN; (2) The Founding of the Cosmopolitan Club, and the Real Meaning of Cosmopolitanism: Mr. LOUIS P. LOCHNER, Founder of the Cosmopolitan Movement; (3) Organization of the Cosmoplitan Club throughout Germany, France, the Balkan States, and Southern Europe: Dr. JOHN MEZ.

September 27.—Questions of International Law, raised by the present European Crisis: Professor F. C. WOODWARD.

October 11.—American Philosophy and the Cosmopolitan Idea: Assistant Professor HAROLD C. BROWN.

November 15.—Poetry Dealing with the Life of Christ: Professor WILLIAM H. CARRUTH.

February 2.—A Report of the Work Accomplished by the Committee for the Relief of Belgium: Professor VERNON L. KELLOGG, and Assistant Professor SAMUEL S. SEWARD, Jr.

SOCIOLOGICAL CLUB

October 28.—The New Civilization: Dr. JULIA SETON, of New York.

YOUNG MEN'S CHRISTIAN ASSOCIATION

September 12.—Religion in Every-Day Life: the Rev. WILLIAM P. MERRILL, of New York.

November 21.—Brazil: President JOHN CASPER BRANNER.

January 28, 29.—Conference of College and Theological Students. General Subject: World Conditions and the Christian Church. (1) Implications for Christianity in the European Situation: The Rt. Rev. Bp. WILLIAM H. MORELAND, of Sacramento; (2) Christianity's Unprecedented Opportunity in the Orient: Dr. J. S. CHANDLER, of India; (3) China's Missionary Needs: Dr. M. D. EUBANK, of Foochow; (4) Some Phases of the North American Student Movement: Mr. GALE SEAMAN, Coast Student Secretary, Y. M. C. A.; (5) Present Day Problems of the Church in North America: President ALBERT PARKER FITCH, of Andover Theological Seminary; (6) Some Human Impressions of the Ministry Today: The Rev. PAUL SMITH, of San Francisco; (7) The Imperative Call for Christian Leaders: President FITCH.

February 27.—The Present War and the Doctrine of Competition: Professor S. I. MILLER.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION

September 21.—The Bible: The Rev. WILLIAM P. MERRILL.

September 28.—The Garden of Our Lives: Deaconess GOODWIN.

October 5.—Commission on Girls' Work: Miss MARGARET LOTHROP.

October 12.—"Safety Zones": Miss LILLIE M. SHERMAN.

October 19.—Women in the War: Dr. JOHN H. MACDONALD.

October 25.—Girls' Work in California: Miss ALICE MOORE.

November 2.—Christian Stewardship: Miss MARY BENTLEY.

November 9.—Purposes of a College Woman: Miss MARY FLOWERS.

November 16.—Prayer: The Rev. ALBERT PALMER.

November 30.—Lonely Girls in San Francisco: Mrs. KECK.

January 18.—Religion of the Heart: Miss MARY BENTLEY.

January 25.—A Personal Religion: President ALBERT P. FITCH.

February 1.—"And they hallowed the fiftieth year": Miss EILEEN EVERETT.

February 8.—Early Days of the Stanford Y. W. C. A.: Mrs. R. L. GREEN, Mrs. C. H. GILBERT, Miss K. BARNES, Miss P. GARTZMANN, Miss E. EVERETT.

February 14.—The New Trend of the Woman's Movement: Miss Bertha Conde.

February 21.—The Poor in the Philippines: Miss E. Parkes.

February 29.—The Life of Miss Dodge: Miss J. Smith.

MECHANICAL ENGINEERING SOCIETY

March 8.—Hydro-Electric Power Plant Engineering: Mr. J. W. Swaren, of San Francisco.

ELECTRICAL ENGINEERING SOCIETY

(Stanford Branch of the A. I. E. E.)

November 16.—Address by Mr. John A. Britton, Vice-President and General Manager, Pacific Gas and Electric Company, San Francisco.

February 29.—Interesting Engineering Developments of the Pacific Gas and Electric Company (illustrated): Mr. W. B. Burbeck, San Francisco.

April 11.—Afghanistan: Technical and Social Impressions: Mr. Perry O. Crawford, '08.

LANE MEDICAL LECTURES

September 20, 21, 22, 23, 24.—Focal Infection: Dr. Frank Billings, of Rush Medical School, Chicago.

POPULAR MEDICAL LECTURES

January 14, 1916.—Medical Research and its Relation to General Medicine: Dr. George H. Whipple, Director of the Hooper Foundation for Medical Research.

January 28.—The Economic Aspect of Disease: Professor Murray S. Wildman.

February 11.—Disease Carriers: Dr. W. A. Sawyer, Secretary California State Board of Health.

February 25.—The Relation of Hospitals to the Community: Dr. George B. Somers.

March 10.—Locomotion in Health and Disease: Dr. Walter F. Schaller.

March 24.—Mental Hygiene: Professor Lillien J. Martin.

Musical and Dramatic Recitals

October 8.—Presentation of "Stop Thief," by Sword and Sandals.

November 5.—Presentation of "Bobby Burnit," by the Sophomore Class.

November 18.—Concert, by the Palo Alto Symphony Orchestra.

February 4.—Presentation of "Happiness," "'Op o' My Thumb," and "Rosalind," by the Masquers.

March 3.—Presentation of "The Great Divide," by the English Club.

March 15.—Concert, by the Palo Alto Symphony Orchestra.

March 30.—Presentation of the Junior Opera, "In Dutch."

May 17.—Presentation of the Oratorio "Elijah," by the University Choir.

PENINSULA MUSICAL ASSOCIATION

October 7.—Violin Recital: Mr. Fritz Kreisler.

December 9.—Song Recital: Mme. Gadski.

March 16.—Song Recital: Florence Hinkle.

April 13.—The Kneisel Quartet.

PHI BETA KAPPA OPEN MEETING

May 17, 1914.—The Address, The New Humanism in the Law: Judge Benjamin Franklin Bledsoe, '96, Los Angeles; the Poem, The Saving Fire: Mr. Frank Ernest Hill, '11.

COMMENCEMENT

May 17, 1915.—Commencement Address: Chancellor David Starr Jordan; Address to the Graduating Class: President John Casper Branner.

INAUGURATION OF PRESIDENT RAY LYMAN WILBUR

January 22.—Addresses by Chancellor David Starr Jordan, Professor John Maxson Stillman, Mr. Forrest S. Fisher, '99, Trustee William Mayo Newhall, and President Ray Lyman Wilbur.

FOUNDERS' DAY

March 9, 1916.—Education and its Processes: President Benjamin Ide Wheeler, University of California.

THE RAYMOND FRED WEST MEMORIAL LECTURES ON IMMORTALITY, HUMAN CONDUCT, AND HUMAN DESTINY

"In memory of our beloved son, Raymond Fred West, a student in Leland Stanford Junior University, who was drowned in Eel River, California, on January 16, 1906, before the completion of his college course, we wish to present to the trustees and authorities of the Leland Stanford Junior University, at Palo Alto, California, the honored Alma Mater of our son, the sum of ten thousand dollars, to be held as a fund in perpetual trust, for the establishment of a lectureship on a plan similar to the Dudleian Lectures and the Ingersoll Lectures at Harvard University. . . .

"It is our wish that such lectures shall not form part of the usual

college or university course, nor shall they be delivered by any professor or instructor in active service in the institution. Such lecturer may be a clergyman or a layman, a member of any ecclesiastical organization, or of none, but he should be a man of the highest personal character and of superior intellectual endowment. He shall be chosen by the Faculty and the Board of Trustees of said University in such manner as the said Board of Trustees may determine, but the appointment in any case shall be made at least six months before the delivery of said lecture. . . .

"The course of lectures shall be known as the 'Raymond Fred West Memorial Lectures on Immortality, Human Conduct, and Human Destiny.'"

In accepting this gift from the donors, Mr. and Mrs. Fred West, of Seattle, Washington, and establishing the lectureship as provided in the terms of the gift, the University has adopted the following plan and regulations:

That these lectures be delivered in alternate years, the first in the year 1911; that the lecturer give at least three lectures; that these lectures be published in book form within not less than two years; that the lecturer have the option of publishing them himself, in which case the University will purchase a hundred copies, or of having the University publish them, in which case it will retain the copyright. In any case, the manuscript of the lecturer must be filed in the University archives;

That the honorarium given be decided in each case by the Board of Trustees, and that unless otherwise ordered the entire earnings of the West fund for the two years be devoted to honorariums and to the purpose of publication;

That the West Lecturer be each time nominated by the President, with the approval of the Advisory Board, and the consent and ratification of the Board of Trustees, as is the case with ordinary appointments.

The Fourth series of the West lectures was given in September-October, 1915, by the Rev. Charles Lewis Slattery, of Grace Church, New York.

The Bonnheim Ethical Dissertations and Discussion

The purpose of the Bonnheim dissertations and discussion, as defined by the Founder, Mr. Albert Bonnheim, of Sacramento, is as follows: "It is not so much desired to obtain new facts or new truths in ethics as it is to place the truth which we now have before as many students as possible, so that they will take greater interest in questions dealing

with ethical problems." The competition is open to all undergraduate students of Stanford University, and is divided into two parts:

1. *The Bonnheim Dissertations.*—The general regulations governing the competition are as follows: Each competitor must deposit with the Registrar before a fixed date in January an essay upon the subject assigned by the committee. The essays must not be signed, but should have some mark of identification and be accompanied by a sealed envelope containing the name of the author. They must be typewritten on thesis paper of regulation size. No limit of length is prescribed, but a treatment not to exceed ten thousand words is recommended. The subject announced is intended by the committee to be a general one. It is desirable that dissertations be limited to some particular phase of the general subject. The judges will announce the names of the four competitors who present the best Bonnheim dissertations, awarding them premiums of $50 each. But no award will be made to any essay not deemed worthy of recognition. Copies of successful dissertations must be deposited in the President's Office for transmission to Mr. Bonnheim.

2. *The Bonnheim Discussion.*—The winners of the Bonnheim premiums for dissertations shall be qualified to engage in the discussion, which will be upon the same subject as the dissertations, and which will be held the first week in February. The Bonnheim prize of $50 will be awarded to the speaker who in his discussion of the subject shows the clearest insight and makes the most effective presentation. Each speaker will be allowed twenty minutes.

The general subject for 1915-16 was "The Relation of the State to the Problem of the Unemployed." The essays were received January 14, and the discussion took place February 4. Premiums of fifty dollars were awarded to Clyde Julian Crobaugh, '19, John Willour Fribley, '16, Edward Goldberg, '17, and John Connell Holland, '17. The Bonnheim Discussion prize was won by John Willour Fribley, '17.

The judges of the dissertations were Professors Brown, Hotchkiss, and Tatlock; of the discussion, the Rev. Frederick E. Morgan, of Palo Alto, and Professors Kirkwood and Stolz.

The subject for 1916-17 will be "Ethics of the Indian Policy of the Government." Dissertations must be left at the Registrar's Office not later than 4:30 p.m., January 12. The decision of the judges will be announced January 26, and the discussion will be held February 6.

Intercollegiate Debate

An Intercollegiate Debate, under the auspices of the Associated Students of the University of California and of the Leland Stanford Junior University, is held in November of each year. In 1914-15 the debate was held November 20, in the auditorium of the Girls' High School, in San Francisco.

The question for discussion was, "Resolved, That the Federal Government should own and operate all railroads engaging in interstate traffic, except interurban electric lines crossing state boundaries." The contestants were John Willour Fribley, '17, Samuel Wynfred Grathwell, '16, and Albert John Hettinger, Jr., '16, of Stanford; Sherman Kennedy Burke, '16, Paul Longstreth Fussell, '16, and Joseph Eggleston Johnston, '16, of the University of California. The judges were Judge F. M. Angellotti, Judge F. H. Kerrigan, and Judge J. E. Richards.

Carnot Medal

The Carnot Medal, presented by the Baron de Coubertin, for the purpose of encouraging the study and discussion, in California, of French history and politics, is awarded annually to the student who, in the opinion of the judges, proves himself the best debater in a contest held for that purpose between Stanford University and the University of California.

Under the rules of the contest the general subject for discussion in 1915-16, "French Social Legislation," was made known in December, 1915. The contest occurs April 7, and the particular phase of the question to be discussed will be made known to the contestants two hours before the time set for the debate.

The Pacific Coast Debates

Debates with the Universities of Washington and Oregon are held under the auspices of the Pacific Coast Debating League, composed of Stanford University, the University of Oregon, and the University of Washington. Each institution is represented by two teams of two men each. The teams debate the affirmative and negative of the same question, which is chosen by the intercollegiate debating committees of the three institutions. The affirmative side of the question debates at home, while the negative side contests at one of the other universities.

The question for 1915-16 is, "Resolved, That the United States should maintain a navy above third class in fighting efficiency." The contests occur March 24.

The Edward Berwick Junior Peace Prize

Under the auspices of the California Branch of the American Peace Society, an annual prize of fifty dollars, called the Edward Berwick Junior Peace Prize, is offered for competition by undergraduate students of Stanford University. The award is made to that speaker who, in a public contest, delivers the address which in the opinion of the judges is most effective in promoting the cause of international peace. A student who has once won the peace prize is not eligible to participate again in the contest. In 1915-16 the contest was held October 19. The contestants were Mervyn Crobaugh, '18, John Francis Elden, Jr., '16, Samuel Wynfred Grathwell, '16, Arthur Lockwood Johnson, '16, and Joseph Soll Turley, '18. The judges were Dr. Elliott and Professors Hall and Murray. The prize was awarded to Arthur Lockwood Johnson, '16.

The date of the 1916-17 contest will be October 17.

Essays on Total Abstinence

A prize of fifty dollars is offered annually, under the auspices of the Woman's Christian Temperance Union, to Stanford students for the best essay on Total Abstinence from Alcoholic Liquors.

Essays in competition for this prize should contain not less than two thousand and not more than three thousand words, and should be sent to the Committee on Literary Contests on or before July 1. The award will be made by a board of judges chosen jointly by officers of the Woman's Christian Temperance Union and the Faculty Committee on Literary Contests. No award will be made if no manuscript is deemed worthy of special recognition and unless at least six essays are submitted. The winning essay is eligible for competition for a state prize of $50. A national prize of one hundred dollars is awarded to the best manuscript of those which have already won local and state prizes. In 1914-15 the local and state prizes were won by John Alford Hanna, gr.

Philological Association

Professor Raymond Macdonald Alden, President.
Instructor Louis Peter de Vries, Secretary.

The University Philological Association was organized September 17, 1892, for the purpose of reading and discussing results of scientific investigations in language and literature. The membership consists of the instructors and advanced students in the different language departments in the University. The regular time of meeting

is the first Thursday of each academic month, excepting September, December, and May, at 3:30 p.m.

Science Association

Associate Professor Sidney Dean Townley, President.
Assistant Professor Frank Walter Weymouth, Secretary.

The Science Association was organized January 17, 1894. Original investigations and papers of general interest on scientific topics are presented from time to time.

The following papers were presented in 1915-16:

October 6.—High Voltage Phenomena: Professor Harris J. Ryan.

November 3.—The Lake Region of the Patagonian Andes: Professor Bailey Willis.

December 8.—What some People have thought about Electrification: Professor Fernando Sanford.

January 19.—A Demonstration of some of our Edible Fungi: Instructor James I. W. McMurphy.

March 1.—Arizona Geology and Ore Deposits as seen from the Surface and Underground in the Mines: Associate Professor Cyrus F. Tolman, Jr.

March 22.—Double Stars: Mr. R. G. Aitken, of the Lick Observatory.

The Forum

Executive Committee: Professor Murray Shipley Wildman, Chairman; Professor Arley Barthlow Show, Secretary-Treasurer; Professor Henry Waldgrave Stuart.

The Forum, organized in 1909, is a Faculty Club for the unofficial discussion of academic questions. The following papers were presented in 1915-16:

November 19.—The Limitation of the Number of Men in the University: Professor William F. Durand.

January 21.—The Value of Athletics at Stanford: Professor David M. Folsom.

February 25.—The Union High School Project: Professor Sidney D. Townley.

March 17.—University Examinations: Professor Henry L. Cannon.

April 14.—The Four-Quarter Year and the Three-Study Program: Professor Charles A. Huston.

LELAND STANFORD JUNIOR MUSEUM

HARRY C. PETERSON, Curator.
GEORGE M. HERRON, Assistant Curator.

In 1880, Leland Stanford, Junior, then eleven years of age, accompanied his parents on a trip through Europe, and collected numerous mementoes of the places visited. In 1883, on a second visit he began to pursue this object more ambitiously, and finally with the idea of establishing a museum. The Leland Stanford Junior Museum was designed by Mrs. Stanford as a memorial to perpetuate this idea, and the various collections are mainly her gift to the Museum.

The collection made by Leland Stanford, Junior, between 1880 and 1884, has been placed in two rooms (A and B), and in room A his own arrangement is reproduced in detail. In the room adjoining (B) are found mementoes of his early life. These two rooms contain especially Egyptian bronzes, Tanagra figurines, Greek and Roman glass, armor, mosaics, Sèvres and Dresden ware, and the like.

The Memorial Room (O) was designed to contain personal mementoes of Senator and Mrs. Stanford. The collection includes ancestral portraits of the Stanford and Lathrop families; two cases devoted to the Grant family collection; racing trophies; Muybridge's first photographs of "Animals in Motion," and subsequent works; the "Last Spike," and other historic relics of the Central Pacific Railroad; a large assortment of Point, Alençon, Chantilly, Duchesse, Honiton, Valenciennes, and other laces; India shawls, fans, Worth dresses, antique jewelry, and European souvenirs.

The vestibule and upper corridor are devoted principally to copies of the old masters.

The Di Cesnola Collection (rooms C and E) contains five thousand pieces of Greek and Roman pottery and glass from the Island of Cyprus.

Room F contains a collection of Venetian glassware and chandeliers, mirrors, and mosaic art pieces, the gift of Messrs. Salviati & Camerino of Venice, Italy. During the past year Salviati & Company have added to their donation a large collection of rare and beautiful pieces of Venetian glassware and mosaic, making this the most extensive exhibit of its kind in America. Iridescent glass, Etruscan vases, Roman lamps, sculptured marble heads, and bas-reliefs of the first century

were added by Mrs. Stanford. Mr. Hopkins has also placed in this room a collection of ancient and modern coins and medals.

The American collection (I) is made up of mound relics, Indian baskets, Acoma ware, utensils, Alaskan canoes, totem poles, etc. In this room is also a display of material of the stone age purchased by Mrs. Stanford in Denmark, as well as a collection of Samoan relics and war implements, given by Chancellor JORDAN. The center case in this room contains practically all the implements extant of the old Mission Dolores, presented by Don Pablo Vasquez, whose father was the last major-domo of the Mission.

In the Chinese and Japanese room (K) there is a collection of bronzes, arms, china, lacquer, cabinets, musical instruments, rich embroideries, and specimens of wood-carving, including the Imperial bedroom set, a marvel in wood-carving and inlaid work. This room contains the famous de Long Collection of Japanese rarities.

The Japanese collection, purchased by Mrs. Stanford in 1902, consists of cloisonne, Satsuma, porcelain, embroideries, Buddhistic images, and ivory carvings. The large bronze Koro, over 300 years old, is especially noteworthy. The Corean collection, the gift of Mr. Timothy Hopkins, contains costumes, household goods, cabinets, screens, etc.

The Fine Arts Collections (rooms P, Q, R, U, and V) include pictures by Messonier, Bouvier, Bonnat, Richter, Carolus-Duran, Van Wyck, Bierstadt, Ch. Landelle, Courtois, Piot, Munier, Brozik, Ricci, Humphrey Moore, Porteilje, Bradford, E. Paoletti, Mazzoni, Keith, Hill, Charles Nahl, C. T. Wilson, and many others.

A recent collection of eighty-five oil paintings, presented by Mr. Thomas Welton Stanford of Melbourne, Australia, includes canvases and panels from Minderhout Hobbema, James Giles, R. S. A., John Frederick Herring, Lienur, Van der Houten, Francis Snyders, W. J. Laidlay, David Bates, John Yarley, Juliun M. Price, J. W. Ready, William Melby, James E. Meadows, Elijah Walton, F. G. S., W. Henry, W. Koek-Koek, E. Wake Cook, T. R. Miles, Sr., John Glover, Herr Schnars-Alquist, Louis Buvelot, William Hart, William Shiels, R. S. A., S. Bird, Patrick Nasmyth, Emil Bayard, Gerard Lairesse, C. Wimmer, Salvator Rosa, G. Koken, John Weenix, Bachman, Kobell, Jr., Charles Stuart, Heinrich Rasch, Melchoir Hondecooter, Marie Angelica Kaufman, Ten Kate, George Earl, Guardabassi, and E. G. Lewis. This collection is in Room U. A collection previously presented by Mr. Stanford includes a group of sixty oil paintings of Australian scenes, the work of I. W. Curtis, of Australia. Many of these are now hung in Room Q.

Room V contains the Anna Lathrop Hewes collection of paintings, statuary, mosaic, etc. Ceramics collected by Mrs. Stanford include Sèvres, Dresden, Royal Berlin, Persian, Pompador crystal, Bohemian and numerous other wares.

Through the courtesy of Wells, Fargo & Co., all gifts intended for the Museum will be transported free of charge over their lines, in shipments of fifty pounds or less, from railroad points in California, Oregon, and Nevada, if addressed to The Curator, Leland Stanford Junior Museum, Stanford University, California.

Pending the complete restoration of the Museum building a temporary installation of exhibits has been made in the main portion.

Museum hours: 10:00 a.m. to 5:00 p.m. except Sundays and holidays.

DEGREES CONFERRED

*September 11, 1914; †January 8, 1915; May 17, 1915.

BACHELOR OF ARTS

GREEK

Annie Arrants
†Vera Lutitia Winn
Philip Doss-Bradley Perham

LATIN

Ruth Davis
Eva May Newnan
Helen Frances Laskey
Emily Virginia Poindexter
Harriett Elizabeth Maines

GERMANIC LANGUAGES

Margaret Cramer
Helen Katharine Kreps
Charlotte Elizabeth Eigenmann
Georgene Amelia Pearsall
Susie May Everson
Anna Marie Rehmke
Mary Hope Gaston
Henrietta Rehmke
Ottilie Katharine Hoernig
Tessie Tag
Morris Elmer Hurley

ROMANIC LANGUAGES

Florence Mabel Gates
Pearl Lydia McCarthy
Agnes Kendrick Gray
Dorothy Ball McLaughlin
†Jeannette McCrory Hitchcock
Eugene Jean Oberlé
Geraldine Ines La Fetra
Florence Goethals Prout
Gladys Adelaide La Fetra
Marcelle Henriette Rouiller
†Edna Langlois
Carrie Isabel Sanford

ENGLISH

Frances Berto Akin
*Mildred Louise Gilbert
†Hazel Myra Ball
Margaret Josephine Gilchrist
†Gladys Catharine Burlingame
Cora Alice Harmon
†Lena Irene Clark
Earl Lafayette House
Edith Irene Coggins
†Martha Judith Job
Lola Azella Cooper
Pearl Madeline Kenney
Mary Louise Curry
Margaret Gill Lee
Margaret Davis
Lydia Margaret Locke
Laura Lillien Ellias
Mabel Frances Loop
Edwin Hopkins Ford
Reva Irene McCann

Margaret Lois McCoy
Mary Vera McNabb
May Gladys Morgan
*Frank Willard Morton
†Frances North
Nora Helen Parker
†Evelyn Ruth Adams Pratt
Genevieve Schellbach
Joela Sharp
Peryl Hazelle Sheldon
†Leonore Evelyn Trent
Velma Elizabeth Woodworth
†Arthur William Wynne

PHILOSOPHY

Ruth Katharine Neimeyer
William Curtis Swabey
†Katherine Frances Todd

PSYCHOLOGY

Rowena Caroline Bush

EDUCATION

*William Elliott Baker
†Neil Orrin Best
†Irene Rose Lucile Cuneo
Hazel Rhoda Davis
Adele Julie Fortin
Esther Lee Guthrie
†Ora Whitley Hooker
Theo Marguerite Horine
Helen Keeley
Mary Sophia Ketman
†Elena Sophia Kimball
*Ernesto Ray Knollin
*Ruth Show Kotok
Elsie Agnes Olcese
Alva Mary Richards
†Martha Nickerson Schofield
Nell Muriel Sugars
†Clarissa Winifred Swingle
Walter Thessing White

HISTORY

Beth Baldwin
Helen May Batcheller
†Helen Bordwell
Charlotte Louise Bothwell
Miriam Alvada Bryan
Corinne Bullard
Grace Champion
Lucile Rose Curtis
†Nina Carrie Daniells
†Edna LeRoyce Downing
†Nan Drury
Frank Roscoe Duernberger
†Leon Ellis
Mary Carolyn Gard
Frederick Herbert Gates
†Margaret Virinda Girdner
Frances Boswell Graham
Gladys Hanna
†Nina Harbour
†George Greiersen Hoisholt
†Grenville Gates Howard
*George Carpenter Ingelow
Emily Dean Jameson
†Meredith Elizabeth Knapp
Nellie D. Knox
Florence Kathleen McGrath
†Ray Cowser Maple
Marion Catherine Montgomery
Minna Ivy Nagel
Bertha Frances Norton
Mary Parkinson
Richard Henry Piatt

Ruth Casner Shelton
†Dorothea Louise Smith
Grace Elizabeth Stillson
Elizabeth Stone
Ilza Katrine Van Eften
Helen Wallace
Eleanor Prescott Walls
Agnes Booth Wells
Woodson Whiting
Esther Theresa Wildman
Jacqueline Wood
Celeste Langdon Young

ECONOMICS

Alva Emrick Barzen
Winona Bassett
Edwin Lawrence Bowes
William Ketcham Bowes
Alice Briggs
Starr Lewis Bruce
James Henry Cartwright, Jr.
Irwin Cary
Donald Maurice Chappel
Neu Chun Chu
Yoong Se Chuck
Alvan Witcombe Clark
Donald Gordon Davy
Margaret Duryea
†Robert McMaster Finch
Roy Milton Good
Olin Wright Graves
†John Manfred Hager
Frederick Coaker Hamilton
Edmund A. Hastings
Winsor Chase Lynch
†Mary Emma McConnel
Emily E. McCord
†Suehiko Miwa
Charles Roe Mulford
Justus Marvin Ostrander
Louise Overacker
John Bertsch Price
Leland Parker Reeder
Alice Marie Rogers
Stanley Stoddard Simonson
Mary Tamzen Sloss
Elizabeth Simonds Taff
Sidney Carr Walker
Francis Foss Wheeler
Clifton Ellsworth Wolcott
†Herbert Betts Wolcott

PRE-LEGAL CURRICULUM

James Douglass Adams
Edwin Lyle Alderson
Clarence Sherman Anderson
Howard Salsbury Anderson
†Helmus Weddel Andrews
Leland Stanford Argall
*Harry Joseph Bordé
Albert Grover Bradford
†John Breuner, Jr.
*William Sherman Burns
Frank Valpey Campbell
George Preston Chalfant
†H. Ben Cox
Albert Freeman Coyle
Arthur Howard Daniels
Julian Ralph Davis
Alfred Rice Edwards
Augustus Sloan Flack
William Boomer Forbes
†Robert de Journel*
Ruth Sayre Lorraine
Harry Justus McClean
Paul Norton McCloskey
Russell Price Marble

Alfred Falck Meyer
†James Andrew Miller
George Harvey Murray
Francis Anthony O'Connell
Joseph Arlington Partridge
Altha Perry
Wilson C. Porterfield
†George Paul Ross
Harrison John Ryon
Franklin Edward Shaw
Talmadge Laughner Smith
Lloyd Croasmun Stevens
Walter Joseph Thalheimer
Lloyd Irving Tilton
†Wilford Hamilton Tully
Clinton Byron Weston

GRAPHIC ART

Dorothea Elizabeth Browning
Eugenia Stewart Burns
Hazel Lorraine Clark
†Celesta Hobson
Marcie Hunt
†Edna Branham Lewis
†Helen Howard Millspaugh
John Olsen

MATHEMATICS

Grace Knight Anderson
Laura Cornelia Clark
Julia Hamilton Conkling
Samuel Thomas Hayward
Bertha Clara Henningsen
Mabel Gertrude Henry
Ruth Atherton Stone
Marian Muriel Tew

PHYSICS

†Edward Hubert Inslee
Edward Everett McCabe

CHEMISTRY

Byron Walter Barshinger
Charles Emerson Boyle, Jr.
Merritt Gates Hunt
†Bernice Jameson
Arthur John McChrystal
Matakichi Mitamura
Allen Edwin Stearn
John Earl Walters
Hazel May White
George J. Zizer

BOTANY

Georgia Helen Bentley
Mabel Edith Clark
†Florence Leonard Scott
Jeremiah William Sheldon
Roxana Judkins Stinchfield
Jessie Ida Wood

PHYSIOLOGY AND HISTOLOGY

†Carlton Leverett Andrus
Edwin Forrest Boyd
*Claude Everett Brown
Thomas Adam Card
John Paul Degnan
Gilbert Edmund Haggart
†George K. Hashiba
Gordon Friedrich Helsley
Oscar Frederic Johnson
George David Kelker
Ray Henry Kistler
Etta Louise Marshall

William Homer Moore
Walter James Moreland
Edward Francis Mullaly
*Virginia Murray
*Leon Ingraham Oppenheimer
Albert Victor Pettit
Lloyd Robinson Reynolds
†Chester Marion Vanderburg
Clarence Wendell Waugh
Dorothy Augusta Wood

ZOOLOGY

Frank Everett Chaffee
Joyce Ada Gardiner
Edna Anne Hannibal
†Helen Louise Pratt

ENTOMOLOGY AND BIONOMICS

Reba Bland
William Hargrave Bloeser
Donald Locke Currier
Rowland Wells Haegele
†Louis A. Keesling
*Shonosuke Nakayama
†Albert Free Swain

GEOLOGY AND MINING

Dave Pierce Carlton
Walker Stillwell Clute
Willard Everett Dunlap
†Elwin Benoni Hall
†Francis William Hayes
Wah Seyle Lee
†Harry Joseph Morgan
Kenneth Daingerfield Pyle
Lester William Schnell
Ralph Hamilton Soper
Christion Madisen Vrang

CIVIL ENGINEERING

Robert Gemmell Adams
*Robert Glover Adcock
John David Arnott
Harold Tolman Avery
Frank Boezinger
Philip Petrie Clover
Donald George Dool
Harry Clarence Fowler
†Clifford Peter Goplerud
Teru Hico Hirasawa
James Sterling Jeffers
Charles Rodgers Johnson
Jere Morrell Kingsbury
Alexander McAndrew
Charles Frederick McCormack
Verne Willson McKinney
Kenneth Rees McPherson
Edward Robert Obrikat
Donald Irving Seymour
James Scott Topham

MECHANICAL ENGINEERING

Clarence Lloyd Addleman
Rufus Gallatin Bond
Edward Mortimer Bonnett, Jr.
Clarence James Coberly
David Jordan Conant
Hugh Murphy Henderson
Herbert Bamford Langille
Homer John Ling
Frank Osbun Olmsted
William Henry Rockman, Jr.
Charles Harvey Stoddard
Lloyd Swayne
William Halford Warren
†John Edgar Yager

ELECTRICAL ENGINEERING

Chester Thorne Allcutt
George Lovell Beaver
Warren Mead Bradford
George Casper Branner
William Baldwin Burbeck
William Laurance Cone
Ko Esaki
†Archibald William Higgins
†Arnold Keller
Roy Emanuel Kistler
*Louis Arthur Lang
Fred S. Mulock
Milton Theodore Rodig
Herbert Joseph Scholz
William King Skolfield
Arthur Jacob Vail
Butler Etter Ward
Newman Ward

BACHELOR OF LAWS

Martin Paul Detels
John Michael Erickson
Sidney Sherwood Green
Alfred Conklin Murray
William Brownlee Owens
Raymond Millard Phillips
Egbert Heber Pierson

MASTER OF ARTS

GREEK

John Daniel Cooke, A. B.
†Emanuel Rhodes Nusbaum, A. B.

LATIN

Mollie Margaret Howe, A. B.
Agnes Sherwin Ives, A. B.
(University of Minnesota)
May Elizabeth Keirns, A. B.
(Parsons College)
Natalie Macrum, A. B.
†Mary Morgan Smith, A. B.
(Vassar College)

GERMANIC LANGUAGES

Josephine Cressey, A. B.
†Helen Clifford Horton, A. B.
Lina Stella Jacob, A. B.
Constance Marie Mader, A. B.
Maud Helen Marks, A. B.
(Mt. Holyoke College)
Mildred Smith, A. B.

ROMANIC LANGUAGES

Elizabeth Casey, Ph. B.
(University of Chicago)
Elizabeth Donovan, A. B.
(College of the Pacific)
Gladys Margaret Lee, A. B.
Ethel Melrose Libis, A. B.

ENGLISH

Edith May Bodley, A. B.
*Elisabeth Lee Buckingham, A. B.
Clara Cram, A. B.
Frances Mary Johnson, A. B.
Ruth Wood Locke, A. B.
(University of So. California)
Hanji Nomura, A. B.
Julia Bell Shands, A. B.
(Southwestern University)

EDUCATION

L. Roy Fulmer, A. B., A. M.
(College of the Pacific)
Arthur Sinton Otis, A. B.
*Frank Alson Scofield, A. B.
Leslie Gaines Smith, A. B.
Joel Andrew Snell, A. B.

HISTORY

Candace Orene Caton, A. B.
John Alford Hanna, A. B.
(Dartmouth College)
John Gaylord Howes, A. B.
Miyozo Kusunoki, A. B.
Rose Vibiana McGonigle, A. B.
Edna Adele Stearns, A. B.

ECONOMICS

Margaret Mulford Lothrop, A. B.
(Smith College)
Jogesh Chandler Misrow, A. B.
(University of Washington)
Sedley Clarendale Peck, A. B.
Mitsuji Tsuzaki, A. B.

MATHEMATICS

Edna Plummer, A. B.

PHYSICS

Florella Kelso Finney, A. B.
Alma Anita Haub, A. B.

CHEMISTRY

John McKee Dodd, A. B.
Howard McKee Elsey, A. B.
Marjorie Greene Foster, A. B.
Winfred Rawdon Goddard, A. B.
Paul Mark Levy, A. B.
Neil Preston Moore, A. B.
Leslie Harrison Sharp, A. B.
(Lake Forest College)
Guy Carleton Swan, A. B.

BOTANY

Harriette Lucile Morin, A. B.
Myrtle Nina Paulson, A. B.

PHYSIOLOGY

Willard E. Kay, Jr., A. B.

ZOOLOGY

Alice Irene Bird, B. L.
(Ohio Wesleyan University)

ENTOMOLOGY

†Clarence H. Kennedy, A.B., A.M.
(Indiana University)
Harold Morrison, A. B.
(Cornell University)
Verne Genoa Stevens, A. B.
Fred Matlack Trimble, B. S.
(Pennsylvania State College)

GEOLOGY

William Otterbein Clark, A. B.
Olaf Pitt Jenkins, A. B.
Wilbur Armistead Nelson, B. S.
(Vanderbilt University)
†Basil Prescott, A. B.
†James Chandler Ray, A. B.

ENGINEER

CHEMICAL ENGINEERING

Frederick Bradshaw Watkins, A. B.

MINING

Roy Parmelee McLaughlin, A. B.

METALLURGY

Thomas West Thompson, A. B.

CIVIL ENGINEERING

Floyd Cromwell Brown, A. B.
Joel Bean Cox, A. B.
Louis Olsen, A. B.
Carl Raymond Shaw, A. B.
John Henry Wiggins, A. B.

ELECTRICAL ENGINEERING

Roland Grotecloss Marx, A. B.

JURIS DOCTOR

Edson Cronk Abel, A. B.
†William P. Butcher, Jr., A. B.
Ben Hunter Dwight, A. B.
(Columbia University)
†James Gordon Emerson, B. S.
(Iowa State College)
Joseph Harold Forster, A. B.
(University of North Dakota)
†William Edgar Gearhart, A. B.
(University of Iowa)
Carl Hughes Gilbert, A. B.
†Roscoe Wadsworth Griffin, A. B.
Harold Brooks Landreth, A. B.
(Occidental College)
Karl Riffle Levy, A. B.
William Anthony Logan, A. B.
Cyril Clyde Lotz, A. B.
†James Stanley Moffatt, A. B.
(University of Chicago)
Charles Fenton Nichols, A. B.
Patterson Dana Nowell, A. B.
Francis Price, A. B.
Hoyt Everett Ray, A. B.
(Cornell University)
Edgar Clarence Smith, A. B.
Homer Roberts Spence, A. B.

DOCTOR OF MEDICINE

James Porter Crawford, A. B.
Esther Clarice Cumberland, B. S.
(Occidental College)
Samuel Robert Downing, A. B.
Justin Keyser Fuller, B. S., M. S.
(University of California)
Ramon Augustus Gilbert, B. S.
(University of California)
Robert Alton Jones, A. B.
Timothy Lyman, A. B.
(Dartmouth College)
Francis Justin McCarthy, A. B.
(St. Mary's College)
Jay Marion Read, B. S., M. S.
(University of California)
Timothy Thomas Shea, A. B.
(St. Mary's College)
Elmer William Smith, A. B.
Harry James Smith, A. B.
Albert Fabian Welin, B. S.
(University of California)
Howard Frank West, A. B.
Clyde T. Wetmore, A. B.
W. Welcome Wood, B. S.
(Huron College)

DOCTOR OF PHILOSOPHY

GERMANIC LANGUAGES

Charles Reining, A. B.
(A. M., Harvard University)

ENGLISH LITERATURE

Walter Clyde Curry, A. M.
(A. B., Woffard College)

ENGLISH PHILOLOGY

*Russell Osborne Stidston, A. M.

CHEMISTRY

Elton Marion Hogg, A. M.
(A. B., College of the Pacific)
Roland Neal, A. B., A. M.
(Cornell College)

FELLOWS AND SCHOLARS

Thomas Welton Stanford Fellowship in Psychic Research

John Edgar Coover . . . . . Stanford University
A. B., Stanford, 1904, A. M., 1905, Ph. D., 1912.

Buckel Fellowship in Education

†J. Harold Williams . . . . . Whittier
A. B., Stanford, 1913, A. M., 1914.

‡George Ordahl . . . . . Palo Alto
A. B., Oregon, 1905, A. M., 1906; Ph. D., Clark, 1908.

Alumni Jordan Scholarships in Medicine

Clement Harisse Arnold . . . . . San Francisco
A. B., Stanford, 1910.

Harry Alphonso Wyckoff . . . . . San Francisco
A. B., Stanford, 1907.

Leland Stanford Junior Memorial Scholarship

Sigurd von Christierson, '17 . . . . . San Jose

W. J. Dickey Scholarships

James Clarke Berry, '18 . . . . . Selma

Norman Jerome Mittenthal, '16 . . . . . Fresno

B. G. Higley ('99) Scholarship

Gwendolen Harriet Garsed, '19 . . . . Stanford University

Joseph Bonnheim Memorial Scholarships

Joseph Goldstein, '18 . . . . . Sacramento

Rhodes Scholarships at Oxford University

Emil Frederic Hollmann . . . . . Oakland
A. B., Stanford, 1911.

†Until November 1, 1915.
‡Since November 1, 1915.

STUDENTS

Name; home residence; major subject; status; University residence; post-office. Post-office in all cases *Stanford University* except where university residence is followed by initial letter of town ('p' indicates *Palo Alto* post-office; 'Mayfield-m,' *Mayfield* post-office, etc.) Street address *Palo Alto* or *Campus* unless otherwise named.

Status.—gr., graduate student; sp., special student; unc., unclassified law. The figures after major subject indicate the number of units of university work completed (and counting toward the 120 units required for graduation), no account being taken of 'deferred,' 'incomplete,' or 'conditioned' work. The star (*) indicates registered *in absentia;* the dagger (†) indicates unadjusted standing from other colleges and universities. (Phys.-Physics; Phyl.-Physiology.)

The superior number [1], prefixed to the name of a student indicates registration for the first semester only; [2] indicates second semester only.

[2]Abbott, William Lindley	San Francisco	PreL.	Phi Delta Theta
Adams, Agnes Irene	Coalinga	Hist. 5	68 Roble
Adams, Earl Clinton	San Jose	Law 107	Delta Tau Delta
Adams, Philip Van R.	Denver, Colo.	Engl. 75	305 Cowper
Adams, Sidney Francis	Stanford Un.	Min. 74	9 Alvarado
Adams, Walter Crawford B. S., Michigan, 1914.	Lodi	Med. gr.	2102 Bush, SF-sf
Adams, William Bryan	San Jose	Econ. 10	Delta Tau Delta
Adams, William Forbes	Stanford Un.	Hist. 12	Cardinal Club
[2]Adamson, Lilburn Leroy	Lower Lake	Engl.	College Terrace
Ainslie, Charles Albert B. S., California, 1913.	Los Angeles	Med. gr.	2102 Bush, SF-sf
Albee, Helen Virginia	Eureka	Engl. 97	84 Roble
Albrecht, L. Dorothy	Los Angeles	Educ. 111	Kappa Alpha Th.
Alderson, Elizabeth H.	San Diego	Engl. 103	Pi Beta Phi
Alderton, Barbara	Palo Alto	Ger. 111	Pi Beta Phi
Alderton, Henry Arnold Jr.	Palo Alto	C. E. 52	Phi Gamma Delta
Alexander, Paul Rothwell	St. Helena	PreL. 13	Chi Psi
Allen, Anita	Palo Alto	Ger. 75	601 Melville-p
[2]Allen, Edith Magee	San Jose	Ent. †	PalmHavenAv,SJ-sj
Allen, Niel Richardson	Grants Pass, Ore.	PreL. 47	119 Encina
Allen, Verner	Los Angeles	Econ. 42	1227 Byron-p
Allhands, Marian H.	Beaverton, Ore.	Math. 74	84 Roble
Allin, Hazel	Pasadena	Span. †10	14 Roble

Allum, Ruth Alice	Riverside	Span. 105	667 University-p
Alsop, Archie S.	Portland, Ore.	C. E. 12	271 Addison
[2]Ament, Charles Dana	Grants Pass,Ore.	Min. 6	4 Salvatierra
Ames, Elmer Ruel	Sacramento	C. E. 46	57 Encina
Ames, Katherine Elizabeth	LosAngeles	Engl. 36	Delta Delta Delta
Ames, Walter Irving	Ontario	PreL. 20	Pine Cottage
Amphlett, Janet Edith	San Mateo	Engl. 39	San Mateo-sm
Andersen, Emelie E.	Spokane, Wn.	Engl. 16	81 Roble
Anderson, Adrien Louis	SanFrancisco	M. E. 103	Delta Tau Delta
Anderson, Emil Shirley	Los Angeles	M. E. 74	89 Encina
Anderson, Frank Julius	Vallejo	Chem. 111	96 Encina
Anderson, George Harold	Palo Alto	Hist. 78	483 Channing-p
Anderson, Laura Patricia	Los Angeles	Engl. 29	KappaKappaGam.
[1]Anderson, Laurel Edwin A. B., Stanford, 1914, J. D., 1916.	Burlingame	Law gr.	Burlingame-b
Anderson, Margaret H. A. B., North Dakota, 1911.	Stanford Un.	Engl. gr.	University Park
Anderson, Melville Weston	Riverside	Math. 12	The Alexandria-p
Anderson,MinervaM.	Regina,Sask.,Can.	Lat. 108	10 Roble
Anderson, Rex Webster	Spokane, Wn.	PreL. 8	16 Alvarado
[1]Anderson, Thomas H.	Statesville,N.C.	Engl. †35	Kappa Alpha
Andresen, Christian A. A. B., Carleton, 1914.	ClaraCity,Minn.	Med. gr.	2102 Calif., SF-sf
Andrews, Ellen Louise	Los Angeles	Hist. 106	KappaKappaGam.
Andrews, Fred Page	Tacoma, Wn.	M. E. 62	Delta Upsilon
Andrews, Ruth	Long Beach	Graph. 105	Delta Gamma
Andrus, Carlton Leverett A. B., Stanford, 1915.	San Jose	Med. gr.	2418 Wash., SF-sf
[2]Angell, Thomas F. B.	Palo Alto	Greek 105	1200 Bryant-p
Anspach, Wilmur Claire	Riverside	Law 82	104 Encina
Anthony, Arthur Bruce	Sunnyvale	Econ. 44	Sunnyvale-s
[1]Antrim, Hugh Seymour, Jr.	Cairo, Ill.	Econ. 37	Theta Delta Chi
Antrim, Walter Ellett	Cairo, Ill.	Graph. 15	Theta Delta Chi
[2]Arata, Winfield Hector	San Luis Obispo	M. E.	535 Everett
Arnold, Clement Harisse A. B., Stanford, 1910.	Palo Alto	Med.gr.	121 6th Ave., SF-sf
Arnold, Edward Wellingham	Riverside	PreL. 45	Kappa Alpha
Arrants, Annie A. B., Stanford, 1915.	Los Angeles	Greek gr.	Sigma Kappa
[1]Arthur, Agnes	Canon City, Colo.	Hist. 41	68 Roble
Asami, Goichi	Honolulu, T. H.	Phyl. 66	1a Alvarado

Ashford, Harry Thomas	RedwoodCity	Educ. 72	Redwood City-r
[1]Askin, John Morgan	Vallejo	PreL. 4	Mariposa Hotel-p
Aten, Albert Boyce	El Centro	Law 74	64 Encina
Aten, Ira D.	El Centro	Econ. 10	107 Encina
Atkinson, Doris	Palo Alto	Educ. 54	Sigma Kappa
Atwater, William Charnley	Hollywood	Econ. 9	Alpha Tau Omega
Aubert, Louisette Marie	San Mateo	Chem. 114	Burlingame-b
Aupperle, Harold V.	Grand Jct., Colo.	Econ. 63	Phi Gamma Delta
Aurell, Verner Christensen	Turlock	Econ. 43	College Terrace
Austin, Leslie Wentworth	San Jose	Chem. 77	107 S.19th,SJ-sj
Austin, Philip Henry	Greenville, Pa.	PreL. 6	Cowper & Tennyson
Auzerais, Phyllis Madeleine	MenloPark	Hist. 41	KappaKappaGam.
Azevedo, John Anthony	Sacramento	Phyl. 26	751 Ramona-p
Azevedo, Manuel Leal	Sacramento	Phyl. 17	751 Ramona-p
Bacon, Asaph Perry	Los Angeles	PreL. †14	Theta Delta Chi
Bacon, Clarence Winfield	Cook	PreL. 48	275 Hamilton-p
Bacon, Ellard Ansel	Oakland	M.E.sp.109	Theta Delta Chi
[1]Bacon, John Andrew	Los Angeles	Econ. †34	Theta Delta Chi
Bacon, Ruth	San Jose	Phyl. 71	Gamma Phi Beta
[1]Bacon, William Cyril	Cando, N. D.	Law gr.	Sigma Chi
A. B., North Dakota, 1913.			
Bailey, Elmer Ellsworth, Jr.	Alhambra	Econ. 2	143 Encina
Bailey, Margery	Palo Alto	Engl.gr.	530Warren,Redwd.
A. B., Stanford, 1914.			
[2]Bailiff, Lawrence Deane	Los Angeles	Span. †	Cooksey Lodge
Baillie, David Gemmell, Jr.	LosAngeles	C. E. †17	Stanford Inn
Baiocchi, Adolph John	San Jose	Med.†50	506 12thAve.,SF-sf
A. B., Santa Clara, 1914.			
Baker, Carl Clifford	Portland, Ore.	Law gr.	4 Salvatierra
A. B., Oregon, 1914.			
Baker, Harry Vincent	Grimes	Phyl. 6	552 Kellogg-p
Baker, Milton Palmer	Los Gatos	M. E. 120	162 Encina
Baker, William Elliot	San Jose	Educ. gr.	Stanford Inn
A. B., Stanford, 1914.			
Bald, Margaret	Nordhoff	Span. †8	28 Roble
Baldwin, Louis Gerlach	Stockton	PreL. 13	Sigma Alpha Ep.
Baldwin, Walter D.	New York, N. Y.	C. E. †11	611 Bryant-p
Ball, Hazel Myra	San Jose	Engl. gr.	Chi Omega
A. B., Stanford, 1915.			
Balthis, B. Douglass	Glendale	Econ. 11	71 Encina
Bandini, Elliott	Los Angeles	C. E. 102	Chi Psi

Bannick, Christian John	Scranton, Pa.	Econ. 108	328 Lytton-p
Barbat, Claire Mabel	San Francisco	Med. gr.	2323 Wash.,SF-sf
A. B., College of Pacific, 1913.			
Barber, Allyn Harshel	Los Angeles	PreL. 49	Zeta Psi
[1]Barker, Anna Ruth	Stanford Un.	Span. gr.	2 Lasuen
A. B., Stanford, 1914, A. M., 1916.			
[1]Barker, Charles Abner	Redlands	Law 120	349 Hamilton-p
A. B., Stanford, 1916.			
Barker, Chester Wing	San Jose	Engl. 52	103 Encina
Barnes, Leonard Stanford	Compton	PreL. 43	515 Waverley-p
Barnes, Manton Muhleman	Monrovia	M. E. 50	25 Encina
Barnes, William Hutt	Berkeley	Phyl. 125	22 Lasuen
[2]Barneson, Harold James	San Mateo	Econ.	Beta Theta Pi
Barney, Earle Sevier	Union City, Tenn.	Hist. 110	542 Cowper
Barnhouse, Alice Naomi	Watsonville	Ger. 73	55 Roble
Barr, Allan Stone	Upland	Econ. †10	411 Waverley-p
Barr, Faris Carlin	Freeport, Ill.	Min. 11	Acacia
[2]Barroll, Elizabeth Bone	Pasadena	Econ.	301 Lowell-p
•Barry, George Long	San Jose	Med. gr.	2418 Wash.,SF-sf
A. B., Stanford, 1914.			
Barry, Raymond Walker	Palo Alto	Ger. gr.	229 Bryant-p
A. B., Ohio Wesleyan, 1915.			
Barry, Wm. Taylor, Jr.	Santa Barbara	Engl. 115	706 Cowper-p
[2]Barton, Harold B.	Worcester, Mass.	Educ. gr.	San Mateo-sm
A. B., Harvard, 1909.			
Barton, John Tracy	Milton, Ore.	Law 15	18 Alvarado
Barton, Lorenzo James	San Mateo	Chem. 56	San Mateo
Baruch, Frederick, Jr.	San Francisco	Law 129	50 Encina
Batchelder, Albert Perkins	Millbrae	Ent. 33	199 Encina
Batchelder, Kittredge	San Francisco	M. E. 5	Phi Gamma Delta
[1]Batcheller, Harry C.C.	Los Angeles	Hist. 37	Phi Kappa Psi
Bauer, Lloyd C.	Pasadena	Zool. 14	Phi Kappa Psi
[2]Baughman, Elmer Jacob	Mayfield	Econ.	Evergreen Park
Baumgartner, Frank Leroy	San Jose	Law 73	Sigma Nu
[1]Beach, Philip S.	Palo Alto	M. E. †51	835 Waverley-p
Beach, Rofena Maude	San Jose	Lat. 73	Pi Beta Phi
[1]Beal, Carl Hugh	Palo Alto	Geol. gr.	243 Byron-p
A. B., Stanford, 1913, A. M., 1915.			
Beal, Edgar Reed	Los Angeles	Law. 55	32 Encina
Beamer, Josepha Helen	Redlands	Ger. 105	Delta Gamma
Bean, James	San Jose	M. E. 12	755 Univ., SJ-sj

Beaudikofer, Ernest Leslie	San Jose	PreL. 13	Belmont-b
Beaver, Mary Ann	Palo Alto	Hist. 79	475 Forest-p
Beaver, Mildred	Palo Alto	Hist. 58	475 Forest-p
Beck, Paul Ward, Jr.	Manila, P. I.	Min. 18	196 Encina
Beckwith, Palmer	Los Angeles	Geol. 6	Sigma Alpha Ep.
Beebe, Mary Josephine	Woodland	Econ. gr.	39 Roble
A. B., Stanford, 1916.			
Beeson, Joseph Josiah	Stagg	Min. 95	36 Encina
[1]Behrens, Luella Eva	Redwood City	Psych. 120	GammaPhiBeta
A. B., Stanford, 1916.			
[1]Behrnd, Gustav A.	Palo Alto	Anat. sp.	275 Hamilton-p
Bell, Georgia Washington	St. Helena	Span. 12	27 Madrono
Bell, Gollin	San Francisco	M. E. 112	Theta Xi
Bellingall, Lolita	Oakland	Hist. 10	KappaAlphaTheta
Bender, Herbert	Palo Alto	M. E. 9	334 Cowper-p
‡[1]Bennett, Byrona Eliza	San Jose	Zool. 75	57 Roble
Bennett, Edwin Oliver	Los Angeles	M. E. 92	97 Encina
Bennett, James Wm.	Greensburg, Ind.	Engl. 110	11 Salvatierra
Bennett, Vivian Mason	Los Angeles	Econ. 10	91 Encina
[2]Bensinger, Harrold Johnson	Los Ang.	Chem. 32	Kappa Sigma
Bent, Wylie Chandler	Portland, Ore.	Econ. 14	Cardinal Club
Benton, Anna Laura	Palo Alto	Span. 106	522 Emerson-p
Berbert, Henry	San Mateo	C.E.126, 129	ClarkDr.,SM-sm
[2]Berendsen, Lloyd Hinz	San Francisco	Econ.	Chi Psi
Berger, Alice Ruth	San Jose	Chem. gr.	73 N. 6th, SJ
A. B., Stanford, 1908, A. M., 1913.			
Bergstrom, Francis Wm.	Stanford Un.	Chem. 53	25 Salvatierra
de Bernardi, Alyssa	Santa Rosa	Span. gr.	Madrono
A. B., Stanford, 1916.			
Berry, James Clarke	Selma	M. E. 33	4 Encina
[1]Best, Raymond Eugene	Riverside	Phys. 121	The Alexandria
A. B., Stanford, 1916.			
Bettannier, Leo Claudy	Pasadena	Econ. sp. 22	134 Encina
Betts, Charles Russell	Estacada, Ore.	M. E. †10	303 Hamilton-p
Betts, Forrest Arthur	Phoenix, Ariz.	PreL. 9	195 Encina
[1]Bevan,CharlesFrederick	Baltimore,Md.	M. E. 120	Phi Kappa Sigma
A. B., Stanford, 1916.			
[2]Bevier, George, Jr.	Spokane, Wash.	Med. gr.	Encina
A. B., Stanford, 1912.			
Bevier, Raymond Keller	Spokane, Wn.	Psych. 10	139 Encina

‡Deceased, November, 8, 1915.

Bianchi, Henry Edwin	San Luis Obispo	PreL. 15	College Terrace
Biggar, Margaret May	Hollywood	Engl. 68	KappaKappaGam.
Bigler, Evelyn Montell	Palo Alto	M. E. 28	534 Channing-p
Bihlman, George Herman	Live Oak	Ent. 64	110 Encina
Bills, Florence Elizabeth	Sacramento	Ent. 10	2 Lasuen
Binkley, Christian Kreider A. B., Stanford, 1899.	Palo Alto	Engl. gr.	323 Guinda-p
[1]Binkley, Robert Cedric	Palo Alto	PreL. 15	323 Guinda-p
Binning, Maybelle Marie	San Mateo	Ger. 10,	205 Elm, SM-sm
[2]Bird, Frank Stanley	Salt Lake City, U.	C. E. 66	158 Encina
Bisch, Edwin Charles	St. Louis, Mo.	Econ. 11	4 Salvatierra
Bishop, Marjorie	La Habra	Engl. 74	1116 Ramona-p
Bishop, Walter	Santee	Law 102	635 Bryant-p
[1]Blabon, Kingdon Beal	Cupertino	PreL. 3	Cupertino-c
[1]Blabon, Walter Dudley	Cupertino	Ent. 1	Cupertino-c
Black, Floyd Davidson A. B., Kansas, 1913.	Palo Alto	Law gr.	712 Bryant-p
Black, Lewis Pitt	Monrovia	Law 115	85 Encina
Blackinton, Fred Stanford	Glendale	Econ. 48	187 Encina
Blaisdell, Frank Ellsworth	San Fran.	Phyl. 42	151 Encina
Blayney, Jay Irvin	Los Gatos	Phyl. †10	18 Alvarado
Bleecker, Robert Boynton	Pasadena	Econ. 101	Delta Upsilon
Blodget, Ward B.	Huntington Beach	C. E. 128	191 Encina
Bloeser, Wm. Hargrave A. B., Stanford, 1915.	Los Angeles	Ent. gr.	541 Cowper
Blote, Harold Carl	Oakland	PreL. 48	Sigma Chi
Blumenthal, Maurice	Douglas, Ariz.	Law 114	82 Encina
Boal, Marion Dickinson	National City	Hist. 92	Alpha Omicron Pi
Bocks, Marion Elise	Cupertino	Graph. 46	Cupertino-c
[2]Bodley, Edith May A. B., Stanford, 1914, A. M., 1915.	Palo Alto	Educ. gr.	353 Lytton-p
Boehm, Herbert Carl	Upland	PreL. 44	841 Bryant-p
Boesch, Claribel Ruth	San Jose	Bot. 110	188 Bryant-p
Boezinger, Agnes Sophie	Palo Alto	Ger. 47	176 Bryant-p
Bol, Cornelis B. S., Montana, 1914.	Meerkerk, Holland	Phys. gr.	College Terrace
Bolinger, Donley	Orange	PreL. 48	5 Stanford Union
Bolter, Lemuel Rose	Logan, Ia	Econ. 96	Sigma Chi
[1]Bonetti, Peggy Ermenia	San Jose	Fr. 26	1470 Alameda, SJ-sj
Bonnett, Irene Bates	Riverside	Engl. 16	21 Roble
Bonnett, William Henry	Riverside	Geol. 52	134 Encina

[1]Bonney, Fred Laman Portland, Ore. PreL. 14 Kappa Sigma
Bontz, Conrad Kauffmann Palo Alto Min. 76 356 Coleridge-p
Bontz, Mildred Katherine Palo Alto Lat. 42 356 Coleridge-p
Boomershire, Edward R. Versailles, O. Math. 102 22 Lasuen
Bordé, Harry Joseph Santa Monica Law gr. Phi Kappa Sigma
A. B., Stanford, 1914.
Bordwell, Helen Los Angeles Hist. gr. Delta Gamma
A. B., Stanford, 1915.
Borland, Norman Burns Martinez Law 79 10 Encina
[2]Botsford, Dorothy Los Angeles Econ. † 65 Roble
[2]Boudreaux, Charlotte Belle MenloPark Engl. Menlo Park-mp
Boulware, George Lynn Palo Alto Min. 12 170 Bryant-p
[2]Bowen, Helen Bernice Willits Educ. † Madrono
Bowes, Frederic Raymond Alameda M. E. 11 127 Encina
Bowes, Glenn Howard Monrovia Min. 7 Stanford Inn
Bowling, Charles Henry Pasadena Econ. 9 Beta Theta Pi
Boyd, Edwin Forrest Palo Alto Med. gr. 2201 Calif., SF-sf
A. B., Stanford, 1915.
Boyd, Hugh Thomas Spreckels Engl. 13 22 Lasuen
Boydston, Chas. Raymond Porterville PreL. 10 Phi Gamma Delta
Boyers, Luther Musson Berkeley Med.gr. 1622 Buena,Berk.-b
A. B., Stanford, 1912.
Boyle, Charles Emerson, Jr. Escondido Chem. gr. 90 Encina
A. B., Stanford, 1915.
Boyle, William Archdall San Rafael Med. gr. 2418 Wash.,SF-sf
B. S., California, 1914.
Boynton, Kinnison Swett Ferndale Chem. 13 334 Lincoln-p
Braden, Joseph Ross Santa Clara Law 92 Phi Kappa Psi
Bradford, Albert Grover Eureka Law gr. 33 Encina
A. B., Stanford, 1915.
Brandt, Emil Charles Pasadena C. E. 100 Delta Upsilon
Brasefield, Beatrice Maddock PaloAlto Greek 71 552 Everett-p
Breneman, Walter E. Kirkwood, Mo. PreL. 9 18 Alvarado
Breniman, Marie Louise San Jose Engl. gr. 151 Schiele, SJ-sj
A. B., College of Pacific, 1915.
Bridgers, Alice Irene Imperial Engl. 55 427 Embarcadero
[1]Bridgers, Edward Leonidas Imperial Bot. 331 Ramona-p
Brier, Edward Blake Los Angeles C. E. gr. 245 Ramona-p
A. B., Occidental, 1913.
Briggs, Otis Emmons Palo Alto Geol. 75 20 Encina
[2]Briggs, Revoe Carlisle Pasadena C. E. gr. 520 Lytton-p
A. B., Stanford, 1913.

Briggs, Samuel Eustace	Pasadena	Chem. 14	520 Lytton-p
Bright, William Oldham	Ft.Scott,Kan.	Chem. 8	222 Kingsley-p
Brinkmeyer, Henry, Jr.	Prescott, Ariz.	C. E. 124	157 Encina
Britt, Ivan Alsingham	Stuttgart, Ark.	PreL. 9	841 Bryant-p
Brix, Emma Marguerite	Fresno	Ger. 87	Chi Omega
Brokenshire, John Roberts	San Jose	PreL. 13	105 Grant, SJ-sj
Brokenshire, Mark Guy	San Jose	Min. †10	105 Grant, SJ-sj
Brooke, Philip Slaughter	Spokane,Wn.	Law 135	Phi Kappa Psi
Brooks, Charles Joseph	Norwood, O.	Educ. 102	18 Alvarado
[1]Brooks, Ruth	San Jose	Greek 71	Pi Beta Phi
Brower, Howard Jefferson	LosAngeles	Econ. 32	Cooksey Lodge
Brower, William Miller	Palo Alto	M. E. 9	The Alexandria-p
Brown, Claude Everett	San Francisco	Med. gr.	2102 Calif., SF-sf
A. B., Stanford, 1914.			
Brown, Edna Marian	Durango, Colo.	Zool. 79	AlphaOmicronPi
Brown, Harold Austin	Los Angeles	Min. 14	Phi Delta Theta
Brown, Kearn Babcock	Palo Alto	Ent. gr.	467 Melville-p
Ph. B., Alfred University, 1912.			
Brown, Lawrence Walker	Oakland	Econ. 18	1160 Bryant-p
Brown, Lorraine Leonore	San Diego	Engl. †9	1499 Cowper-p
[1]Brown, Olive Coram	Palo Alto	Engl. gr.	467 Melville-p
A. B., Idaho, 1909.			
Brown, Philip Foster	Reno, Nev.	PreL. 42	Cardinal Club
Brown, Spencer Dodge	Pasadena	PreL. 7	16 Alvarado
[2]Brown, Willisa Wilson	Mountain View	Ger. †	81 Roble
Browne, Ashley Colt	Palo Alto	Ent. 11	345 Lincoln-p
Browne, Frances Amelia	Palo Alto	Graph. 39	345 Lincoln-p
Brun, Otis Gorham	San Francisco	PreL. 56	Kappa Sigma
Brunell, Norman	Mansfield, Mass.	Chem. 11	18 Alvarado
Brunenkant, Edward J.	Florence, Ariz.	PreL. 49	1401 Emerson-p
Bruns, Walter Emil	Oakland	Econ. 15	Cardinal Club
Bryan, Carleton Felton	San Francisco	PreL. 36	Sigma Alpha Ep.
[1]Bryant, Ethel Wallace	Visalia	Hist. gr.	328 Churchill-p
A. B., Stanford, 1908.			
Brydolf, Vernon Mars	San Bernardino	Law gr.	Sigma Nu
A. B., Stanford, 1914.			
Budd, Raymond	Montivideo, Minn.	Econ. †16	25 Salvatierra
Buffum, Harry Austin	Long Beach	PreL. 50	Delta Chi
[2]Buffum, Thurlyne	Long Beach	Fr. †	73 Roble
Bullis, James Stevenson	Los Angeles	Law 88	Beta Theta Pi
Bullis, Richard Omri	Los Angeles	Phyl. 42	Beta Theta Pi

[2]Bullis, Rowena Elizabeth	Alhambra	Engl.		8 Madrono
Bundy, Florence Sorrita	Redwood City	Math. gr.		Sigma Kappa
A. B., Stanford, 1916.				
Burbank, William Freeman	San Jose	Law 104		198 Encina
Burch, Everett Tunison	Portland, Ore.	Chem. 9		Chi Psi
Burdick, Muriel Pierce	Long Beach	Ger. 12		81 Roble
Burks, Dana, Jr.	Venice	Graph. 48		AlphaTauOmega
Burlingham, Ernest V.	ForestGrove,Ore.	Chem. †44		96 Encina
Burrell, Chester Alton	San Jose	M. E. 13		196 S. 8th, SJ-sj
Burroughs, Emily Viola	Cayucos	Hist. †14		57 Roble
Burroughs, Spencer Ephriam	Susanville	Law 64		656 Bryant-p
Burrows, Harold H.	Salt Lake City, U.	Phyl.-Med. 105		55 Encina
Burton, Clarence M.	Salt Lake City, U.	M. E. †15		17 Salvatierra
Butcher, Alice Elia	Santa Paula	Hist. 109		Chi Omega
Butterfield, Irvis Wilder	Palo Alto	Geol. 11		835 Middlefield-p
Bynum, Lindley Davis	Monrovia	Engl. †11		85 Encina
Cady, Loris Vaughn	La Porte, Ind.	Law sp.unc.	8,	275Hamltn.-p
Cain, Ruth	Salt Lake City, U.	Psych. 110		Sigma Kappa
Calderwood, Ada Imogene	Palo Alto	Graph. 43		531 Cowper-p
Callanan, Joseph Ignatius	San Fran.	Med.		2801 22d, SF-sf
A. B., St. Mary's, 1911.				
Calloway, Mary	Pontotoc, Miss.	Engl. gr.		Gamma Phi Beta
A. B., Mississippi Industrial Institute, 1912.				
Calvert, John George	Inglewood	Phys. 14		532 Homer-p
de Camp, Irene Thorburn	Claremont	Fr. gr.		Chi Omega
A. B., Pomona, 1915.				
[1]Campbell, Alan Randolf	Palo Alto	Geol. 36	R.R. 1,	Redwood-r
Campbell, Daniel W.	Flagstaff, Ariz.	Econ. 9		Sigma Chi
Campbell, Frank Valpey	San Jose	Law gr.		Delta Chi
A. B., Stanford, 1915.				
Campbell, Harry Archibald	Santa Cruz	Geol. 31		64 Encina
Campbell, Jean	San Francisco	Hist. 44		KappaAlphaTheta
Campbell, Leon George	Pasadena	Phyl. 74		Zeta Psi
Card, John Lockhart, Jr.	Palo Alto	Chem. 34		764 Channing-p
Card, Thomas Adam	Palo Alto	Med. gr.		2418 Wash., SF-sf
A. B., Stanford, 1915.				
[1]Carden, Arthur M.	Palo Alto	PreL. 11		323a Guinda-p
[1]Cardiff, Charles Edwin	Palo Alto	PreL. 14		540 University-p
Carey, Thomas Sheridan	Los Angeles	Phyl. 39		Stanford Union
Carlyle, Claire Howard	San Martin	Econ. 11		545 Bryant-p
[1]Carnes, Grover Cloe	DeWitt, Ark.	Law 116		The Alexandria

Carney,MaryFlorence	Springdale,Mont.	Hist. 85		Delta Gamma
[1]Carr, Brenton Stanley	Los Angeles	Econ. 120		Kappa Sigma
A. B., Stanford, 1916.				
Carroll, Daniel Brendon	Sydney, Aust.	Geol. 76	Sigma Alpha Ep.	
Carroll, Frederic H.	El Paso, Tex.	Law. sp. 65	358 Homer	
Carter, Jessie Marie	Pasadena	Hist. 41		Sigma Kappa
Carter, Philip Staats	Glastonbury,Conn.	M. E. 71		16 Alvarado
Carter, Rae Best	Modesto	PreL. 41		197 Encina
Casad, Elizabeth Gail	San Francisco	Hist. 106		52 Roble
Case, Walter Mackay	San Francisco	Hist. gr.		660 Waverley
A. B., College of Pacific, 1914.				
Cass, Clarence Hunter	Los Angeles	Econ. sp. 12		Zeta Psi
Cass, Donald	So. Pasadena	Med. gr.	2418 Wash., SF-sf	
A. B., Stanford, 1914.				
Cass, Quincy	So. Pasadena	Law 106.		Zeta Psi
[2]Cassady, Lloyd Herbert	Whiting, Ia.	PreL. 42		Sigma Nu
Castle, Otis Henry	Pasadena	Law gr.		Delta Chi
A. B., Stanford, 1914.				
Cathcart, Franklin D., Jr.	Long Beach	Econ. †15		Alvarado Hall
Cattell, Anna Ashburner	SanFrancisco	Hist. 45		509 Hale-p
Caughell, Vernon Eldridge	Fresno	Graph. 15	1727 Waverley-p	
Caughey, Edgar Reginald	Ukiah	PreL. 28		68 Encina
[1]Cavanaugh,CatharineAnn	Detroit,Mich.	Educ. 124		4 Lasuen
A. B., Stanford, 1916.				
Cecil, Harlan Edward	Modesto	PreL. 11		69 Encina
[1]Chace, John Derrol	San Jose	Econ. 120		Delta Kappa Ep.
A. B., Stanford, 1916.				
Chamberlain, Clyde J.	SaltLakeCity,U.	Phyl. †8		6 Encina
Chamberlain, Mary Bufink	Palo Alto	Educ. gr.		319 Alma-p
A. B., Indiana, 1898.				
Chambers, George Robert,Jr.	Oakland	PreL. 15		Alvarado Hall
[2]Chambers, William Copeland	Lakeside	PreL.		County Road
Chandler, Constance	Los Angeles	Engl. 32	Alpha Omicron Pi	
Chandler, Henry Arwin	San Diego	Geol. 13	Phi Delta Theta	
Chandler, Loren Roscoe	Fresno	Phyl. 46		37 Encina
Chandler, Ruth	Los Angeles	Hist. 15	Alpha Omicron Pi	
Chang, Wei Ju	Peking, China	Chem. 21	405 Emerson-p	
Chapman, Charles McDowell	Santa R.	Hist. 27		22 Lasuen
Chapman, Herbert Samuel	Clayton	Med. gr.	1939 Clay, SF-sf	
A. B., Stanford, 1914.				
Chapman, John Frye	Redlands	Med. gr.	2418Wash.,SF-sf	
A. B., Stanford, 1909.				

Chapman, Lawrence L.	Santa Rosa	Hist. 30	Guild Hospital
[2]Chapman, Ray J.	Mountain View	E.E.103	R.R.18,Mt.View-mv
Chapman, Sherwood	San Francisco	Engl. 84	Kappa Alpha
Chapman, Wayne C.	Pendleton, Ore.	PreL. 51	Sigma Alpha Ep.
Chappell, Delos Allen, Jr.	Riverside	Law †3	Sigma Alpha Ep.
[2]Chase, Edith June	San Jose	Engl. †	Madrono
Chase, Frank Forrester	Los Angeles	PreL. 35	Sigma Alpha Ep.
[2]Childress, Henry Harrison	San Mateo	PreL.	San Mateo-sm
[1]Chiles, Chester Arthur	Ellensburg,Wn.	Educ. 86	Stanford Inn
Chislett, William, Jr.	Los Angeles	Lat. gr.	20 Lasuen
A. B., Stanford, 1910, A. M., 1912.			
Choate, Nellita Naomi	Los Angeles	Engl. 75	KappaKappaGam.
Christensen, Albert E.	Audubon, Ia.	C. E. 109	75 Encina
Christensen, Earnest Stephen	Pasadena	Geol. 73	Alpha Tau Omega
Christiansen, Elizabeth Bolin	San Fr.	Med. gr.	2059 Bush, SF-sf
A. B., California, 1915.			
von Christierson, Sigurd	San Jose	Phyl. 80	108 Encina
[2]Churchill, Owen Porter	Los Angeles	Econ.	Delta Upsilon
Clancy, Gertrude Margaret	Riverside	Hist. 108	Pi Beta Phi
Clark, Charley Francis	Vinton, Ia.	Chem. †12	729 Emerson-p
Clark, Cora Bowen	New York, N. Y.	Hist. †8	3 Lasuen
Clark, Daniel Mabee	Scranton, Pa.	Econ. 55	405 Emerson-p
Clark, Donald Francis	Stanford Un.	Econ. 69	7 Alvarado
Clark, Egbert Bailey, Jr.	Upland	Econ. 48	Phi Kappa Sigma
Clark, Frances Naomi	San Jose	Zool. 43	64 Roble
Clark, George Harold	Ida Grove, Ia.	PreL. 35	Cardinal Club
Clark, Helen Virginia	Stanford Un.	Fr. 49	7 Alvarado
Clark, Henry Russell	Los Angeles	Chem. 48	729 Emerson-p
Clark, Laura Cornelia	San Jose	Math. gr.	64 Roble
A. B., Stanford, 1915.			
Clark, Laura Elizabeth	Salem, Ore.	Zool. gr.	19 Madrono
A. B., Stanford, 1915.			
Clark, Lester Lyon	Stockton	Phyl. 27	Sigma Alpha Ep.
Clark, Mabel Edith	Redlands	Bot. gr.	Madrono
A. B., Stanford, 1915.			
[1]Clark, Paul Ulysses	San Jose	M. E. 28	898 S. 8th, SJ-sj
Clattenburg, Herbert A.	Eureka	Med. gr.	2102 Calif., SF-sf
A. B., Stanford, 1915.			
[2]Claussen, Thomas Hibben	Sausalito	C. E. 94	11 Salvatierra
Clifford, Mildred Elsie	Burlingame	Ent. 82	Delta Delta Delta
Cline, George Willis	San Jose	Med.gr.	2218Webster,SF-sf
A. B., Stanford, 1914.			

Clover, Greayer	Arcadia	Econ. 15	Delta Kappa Ep.
Clowe, Virginia B.	Woodland	Hist. 104	Pi Beta Phi
Cluff, Geraldine Marion	Reno, Nev.	Hist. 41	KappaAlphaTheta
Cochrane, William Roy	San Francisco	PreL. 25	Zeta Psi
Cody, Mervyn Joseph	San Francisco	M. E. sp. 109	Cardinal Club
Coe, Harry Carson	San Jose	Bact. 95	56 Encina
Coe, Wilbur F.	Glencoe, N. M.	Law 87	39 Encina
Coffin, Mila Lucille	Reno, Nev.	Psych. 115	DeltaDeltaDelta
Cogswell, Elinor V.	Klamath Falls, Ore.	Engl. 124	327 Emerson-p
[2]Coil, Marjorie Kathryn	Woodland	Engl. †	66 Roble
Cokely, Leon Howard	Coalinga	C. E. 84	132 Encina
Colby, Clinton Hardin	San Francisco	PreL. 5	Alvarado Hall
Cole, Harold Lester	Los Angeles	Econ. 33	32 Encina
[2]Coleman, Alfred H.	Tacoma, Wash.	Geol. 44	Delta Upsilon
Coleman,RichardRobt.,Jr.	LosAngeles	PreL. 51	Delta Kappa Ep.
[1]Coleman, Thomas Lynch A. B., Stanford, 1912.	Stanford Un.	C. E. gr.	Delta Kappa Ep.
[2]Collett, Beryl Boswell Bishop A. B., Greenville College, 1908.	Palo Alto	Engl. gr.	265 Channing-p
Collins, Gaylord Carter	Los Angeles	Econ. 76	Chi Psi
Collins, Nelson Ernest	Knights Ferry	C. E. sp. 46	Acacia
Collins, Walter W.	Radford, Y. T., Can.	M. E. 13	192 Encina
Colombet, Anita Barbara	San Jose	Econ. 88	KappaKappaGam.
Coman, James Lindley	Alhambra, Ariz.	Chem. 45	Theta Xi
Compton, Robert Howard	Palo Alto	PreL. 20	437 Bryant-p
[2]Conant, David Jordan A. B., Stanford, 1915.	San Jose	M. E. gr.	Theta Xi
Conard, Horace Milton	San Diego	PreL. 49	Delta Chi
Conkling, Julia Hamilton A. B., Stanford, 1915.	El Centro	Math. gr.	DeltaDeltaDelta
Connell, George Albert A. B., Stanford, 1914.	San Jose	Chem. gr.	Theta Xi
Connelly, Stella Louise	Palo Alto	Hist. 101	KappaKappaGam.
Cook, Charles Franklin	Long Beach	Law 110	12 Encina
Cook, Clyde Swift	San Jose	Econ. 28	College Terrace
Cookson, Howard Alex.	San Francisco	M. E. sp.	PhiGammaDelta
Cooley, Philip Harmachis	Santa Cruz	Hist. 46	861 Channing-p
[1]Cooper, Dorothy Joan A. B., Stanford, 1916.	San Francisco	Hist. 120	KappaKappaGam.
Cooper, Harold John	San Francisco	Phyl. 75	Beta Theta Pi
Cooper, John Alfred	Modesto	Phyl.-Med.106	411Wavrly.-p
[3]Copley, Ralph David	Fosteria	C.E. 144	StoneAv.SanJose-sj

Coppes, Ward Eldon	Nappanee, Ind.	Econ. 13	319 Addison-p
[1]Corbet, Charles	San Francisco	PreL. 4	Delta Upsilon
[1]Cory, Margaret Esther	Fresno	Hist.122	KappaKappaGam.
A. B., Stanford, 1916.			
[2]Cottle, Katharine Elva	Los Angeles	Hist. †	4 Roble
[1]Cotton, Helen Gertrude	Los Angeles	Chem. †5	40 Roble
Cottrell, Clifton Carlyle	San Jose	Econ. 24	Stanford Museum
[1]Cottrell, Joseph Paul	Colton	Law gr.	8 Encina
A. B., Stanford, 1914, J. D., 1916.			
Couch, Howard Hunt	Lindsay	M. E. 12	2 Encina
[2]Council, Clarence Bloomfield	Pasadena	PreL. 44	Phi Gamma Delta
Cowan, Charles S.	Sacramento	Phyl. sp. 13	8 Encina
[1]Cowan, Floyd Wellesley	Hemet	Law gr.	Chi Psi
A. B., Stanford, 1914, J. D., 1916.			
Cowdrey, Mildred Gould	Palo Alto	Chem.†8	AlphaOmicronPi
Cowgill, George Raymond	Fresno	Phyl.-Med. 115	173 Encina
[1]Cowin, James	Winnipeg, Can.	C.E.gr.	505Embarcadero-p
M. E., Minnesota, 1907.			
Cox, Anna Shipley	San Jose	Lat. gr.	855 Chapman-sj
A. B., Stanford, 1909, A. M., 1913.			
Cox, H. Ben	San Jose	Law gr.	77 Encina
A. B., Stanford, 1915.			
Crabtree, Rebekah Taylor	San Diego	Ger. †7	Pi Beta Phi
Craig, James Gourlay	Long Beach	PreL. 45	Delta Chi
Crane, Wm. Whitfield, Jr.	Oakland	Phyl. 75	Sigma Nu
Crawford, Perry Orson	Los Angeles	E. E. gr.	526 Forest-p
A. B., Stanford, 1908.			
Crist, Marian B.	Washington, D. C.	Graph. 15	38 Roble
Crobaugh, Clyde Julian	San Jose	PreL. 6	66 Stockton, SJ-sj
Crobaugh, Mervyn	San Jose	Econ. 48	66 Stockton, SJ-sj
Crocker, Clarke Wilkins	Selma	C. E. 84	54 Encina
Crocker, Percy Summers	Selma	Geol. 40	54 Encina
Cronenwett, Fred McCall	Monrovia	C. E. 72	187 Encina
Crosby, Carlisle Cameron	Hayward	PreL. 13	Kappa Sigma
[1]Cross, Harold Henry U.	Croydon,Eng.	Phyl. sp. 7	328 Churchill
Cross, Helen Angeline	Merced	Engl. 46	53 Roble
Cross, Joseph Cameron	San Francisco	Engl. 84	Phi Delta Theta
Crowe, Harold Enos	Long Beach	Phyl. 78	765 Channing
[1]Crutcher, Ruth Cary	GreatFalls,Mont.	Span. 35	Delta Gamma
Cullen, Thomas Joseph	Gilroy	Geol. 65	57 Encina
Culp, Crozier C.	Coeur d'Alene, Ida.	PreL. 14	205 Encina

Culp, Winifred	Escondido	Chem. 78	35 Roble
Cunningham, Burton Leigh	Palo Alto	Geol. gr.	435 Forest-p
B. S., Oregon Agricultural College, 1908.			
Curler, Ben Vogel	Elko, Nev.	Law 73	Cardinal Club
Curry, Marjorie	Palo Alto	Econ. 43	Kappa Alpha Th.
Curry, Mary Louise	Palo Alto	Engl. gr.	Kappa Alpha Th.
A. B., Stanford, 1915.			
Curtice, Aubrey Arthur	Spokane, Wn.	Geol. 11	Delta Upsilon
Curtis, Lucile Rose	Los Angeles	Hist. gr.	Alpha Omicron Pi
A. B., Stanford, 1915.			
Curtis, Wallace Burdett	Rochester, N.Y.	M. E. 102	357 Kingsley
Curtner, William Weller	Warm Springs	Ent. 96	100 Encina
Dachner, Richard	Eggesin, Pomm., Ger.	M. E. sp. 29	1310 Bryant
Daily, Wendell T.	Carpinteria	C. E. sp. 8	College Terrace
Dains, Ivores Roy	Santa Clara	PreL.51	755Franklin,SC-sc
[1]Dale, Lawrence Daniel	Troy, Ohio	Econ. †3	The Alexandria-p
[2]Dalton, Earl Thomas	Palo Alto	Econ.	215 Cowper-p
[2]Dalzell, William C.	Omaha, Neb.	Law gr.	318 Emerson-p
A. B., Stanford, 1912.			
D'Ambrogio, Natalis J. V.	Rome, Italy	Hist. 73	334 Homer-p
Dana, Harvey Drexler	San Jose	C.E.31	231Minnesota, SJ-sj
[1]Dang, Hie Siong	Foochow, China	Hist. †7	19 Salvatierra
Daniells, Alva A.	Lindsay	Min. 11	Theta Xi
[1]Daniells, Nina Carrie	Lindsay	Hist. gr.	25 Roble
A. B., Stanford, 1915.			
Daniels, Raymond E.	Redlands	PreL. †12	Delta Chi
Darke, Frederick Eugene	San Jose	PreL. 37	2 Salvatierra
Darling, Eliza Edington	Ventura	Graph. 103	Chi Omega
Darrah, Guard Clement	Lodi	PreL. 45	5 Encina
Davids, Mark	Los Angeles	Law 73	3 Encina
Davidson, Gordon McM.	Los Angeles	M. E. †31	16 Alvarado
Davidson, Marian Kirk	Alhambra	Lat. 42	Pi Beta Phi
[2]Davies, Ivor J.	Evanston, Wyo.	M. E. 77	18 Alvarado
[1]Davis, Alexander W.	Pomona	Law gr.	Theta Delta Chi
A. B., Stanford, 1914, J. D., 1916.			
Davis, Barber Ferdinand	Spokane, Wn.	PreL. 44	Cardinal Club
Davis, Benjamin Franklin	Woodland	Hist. 6	Phi Gamma Delta
[1]Davis, Charles Skinner	Honolulu,T.H.	Law gr.	Acacia
A. B., Stanford, 1914, J. D., 1916.			
Davis, Christopher Buggeln	Chicago, Ill.	Econ. 42	160 Encina
Davis, Frank Audel	Santa Maria	Econ. 14	69 Encina

Davis, Gordon Arthur	San Jose	Engl. 30	Cardinal Club
Davis, Herbert Leslie	Westgate	PreL. 11	Sigma Nu
[2]Davis, Lavoy Henry	Tonopah, Nev.	Engl. †	The Alexandria
Davis, Paul H.	Lindsay	M. E. 11	22 Encina
Davis, Philip Du Mond	Los Angeles	Phyl. 31	765 Channing
Davy, Donald Gordon	San Jose	Med. gr.	Delta Kappa Ep.
A. B., Stanford, 1915.			
[1]Davy, Dorothy	San Jose	Graph. 123	Kap.Kap.Gam.
A. B., Stanford, 1916.			
Dawley, Sibley Moulton	Saratoga	Ent. 15	Saratoga-s
Day, Carl Edwin	Watsonville	Law gr.	155 Encina
A. B., Stanford, 1914.			
Day, Jack George	Portland, Ore.	Law. 56	Zeta Psi
Dean, Charles Amos	Merced	Phyl. 9	1005 University-p
[2]Dean, Marjorie L.	Fairmont, Minn.	Lat. †	16 Madrono
Decius, Harold Wesley	Los Angeles	Chem. 80	Zeta Psi
Degnan, John Paul	Yosemite	Med. gr.	2428 Pine, SF-sf
A. B., Santa Clara, 1910, A. M., 1913.			
De Mund, Herman Edwin	Los Angeles	Econ. 16	16 Alvarado
Denham, Chas. Maurice	ArroyoGrande	C. E. 97	58 Encina
Denhart, Harry John	San Jose	Law 97	170 Encina
Denhart, Helen Lucile	San Jose	Phyl.-Med. 104	Chi Omega
Dennie, Benjamin Franklin	Long Beach	C. E. 45	Kappa Alpha
[2]Dent, Leslie Ferdinand	Berkeley	Econ. 76	459 Hamilton
Derby, Richard	San Francisco	M. E. 14	45 Encina
Derwent, Forrest Elmer	Clinton, Mo.	Educ. 6	415 Lytton-p
Desmond, Harold Francis	Los Angeles	Educ. 57	333 Waverley-p
Devine, Charles Henry	Lodi	PreL. 7	515 Waverley
Dewey, Geraldine Dacia	Nampa, Ida.	Engl. 22	Alpha Phi
Dickey, Frank Fletcher	San Francisco	M. E. 73	Zeta Psi
Dickinson, Wm. George	Los Angeles	PreL. 44	Delta Tau Delta
Dievendorff, Horton Harold	SanDiego	Geol. 62	Kappa Alpha
Dingley, Robert Gardner	Palo Alto	Law 52	575 Kellogg-p
Dingley, Walter Frederick	Palo Alto	Chem. 108	575 Kellogg-p
Dinsdale, Merle Vere	Woodland	Hist. †28	59 Roble
Dixon, Robert James	San Jose	Phyl. 45	34 Magnolia,SJ-sj
Dobbings, Dorothy Bell	Soldiers'Home	Hist. 14	30 Roble
Doble, John Ashton	San Francisco	M.E.sp.43	190SeaCliff,SF-sf
Doble, Wm. Ashton, Jr.	San Francisco	M.E.sp.12	190SeaCliff,SF-sf
Dodds, Lauren Humphrey	Palo Alto	C. E. 7	667 Channing-p
Dodge, John Wallace	Berkeley	C. E. 108	177 Encina

Doebler, John H., Jr.	Los Angeles	Chem. †12	5 Encina
Dolan, Otis Dyer	Monrovia	Econ. 41	93 Encina
[2]Dolbow, Floyd Weeks	Spokane, Wash.	M. E. 51	900 Waverley-p
Donaldson, Melvin Smith	So. Pasadena	Chem. †11	18 Alvarado
Donaldson, Robert Anders	Denver, Colo.	Engl. 72	60 Encina
Donnel, Harold G.	Rawlins, Wyo.	Engl. 14	244 Webster-p
Donovan, Mary Monica	San Jose	Med. gr.	2323 Wash., SF-sf
A. B., College of Pacific, 1913; A. B., Stanford, 1914.			
Dorn, Marion Victoria	San Francisco	Graph. 106	GammaPhiBeta
Doron, Joseph Smith	Phoenix, Ariz.	Chem. 24	Theta Xi
Dorris, Edwin Drake	Phoenix, Ariz.	Econ. 5	22 Lasuen
[2]Dorroh, Terese Beatrice	Angels Camp	Engl. 72	Chi Omega
Dowdle, Joseph Edward	St. Louis, Mo.	Span. 12	343 Cowper-p
Dowling, Paul Henry	Los Angeles	Engl. 105	Delta Tau Delta
Downs, Kenneth Hurley	Tehachapi	C. E. 12	4 Salvatierra
[1]Doxsee, Wilbur Harvey	Redwood City	Educ.gr.	79Claremont,RC-r
A. B., Stanford, 1913.			
[2]Draper, Guy	Arroyo Grande	Chem. 12	94 Encina
[2]Draper, Roscal Leroy	Arroyo Grande	Med.gr.	1410Octavia,SF-sf
A. B., Stanford, 1913.			
Dreese, D. Dayton	Akron, Ohio	PreL. 7	650 Waverley-p
[1]Drinkwater, Harold Paul	Denver, Colo.	Law gr.	Alpha Tau Omega
A. B., Colorado, 1913.			
Driscoll, John G., Jr.	San Luis Obispo	PreL. 25	67 Encina
Driver, Herschel L.	Portland, Ore.	Geol. 45	Theta Xi
Driver, Robert Sample	Sacramento	PreL. 10	Theta Delta Chi
Drown, Marion Elizabeth	Nordhoff	Span. †13	Delta Gamma
Dubendorf, Horace Hayes	Palo Alto	Geol. 89	801 Waverley-p
[1]Dugan, Gerald A.	Tonopah, Nev.	Geol. 19	The Alexandria
Dumpit, José O.	Banang, La Union, P. I.	Phyl. 13	14 Alvarado
[2]Duncan, Flora McRae W.	Palo Alto	Greek	975 Hamilton-p
Duncan, John Atkinson	Yuba City	Med. †	225 Fell, SF-sf
Duncan, Robert John	Burlingame	Min. 41	Burlingame-b
Dunford, Wm. S.	Bloomington, Ida.	PreL. 13	704 Bryant-p
Dungan, Donald Kembel	McCook, Neb.	M. E. 13	129 Encina
Dunlap, David Porter	Douglas, Ariz.	Law 107	117 Encina
Dunlap, Marjorie Louise	Hanford	Graph. 106	Chi Omega
Dunlop, Florence Edetha	San Francisco	Med. gr.	2321 Sacto., SF-sf
A. B., Stanford, 1913.			
Dunn, Chauncey Homer, Jr.	Sacramento	PreL. 12	PhiGammaDelta
Dunn, Herbert Iliff	San Francisco	PreL. 36	Zeta Psi

Dunnell, Leo Cornelus	Cordelia	PreL. 11	22 Lasuen
Dunshee, Herva Consuelo	Palo Alto	Graph. 30	734 Waverley-p
[1]Duren, Nellie Isabelle	Maricopa	Ger. gr.	324 Emerson-p
A. B., Stanford, 1914.			
Durgin, Eva	Cupertino	Med. gr.	2329 Sacto., SF-sf
A. B., Stanford, 1914.			
Durgin, Rubie Mae	Cupertino	Med. gr.	2329 Sacto., SF-sf
A. B., Stanford, 1914.			
Durney, Raymond Joseph	Alameda	Econ. 35	Delta Kappa Ep.
Duryea, Anne	Palo Alto	Engl. 46	308 Lincoln-p
Duryea, Margaret	Palo Alto	Econ. gr.	308 Lincoln-p
A. B., Stanford, 1915.			
[1]Dutton, Earl Treff	Los Angeles	Educ. 120	36 Encina
A. B., Stanford, 1916.			
Dykeman, W. Jerome	Tilly Foster, N.Y.	Econ. 14	605 Gilman-p
Dykes, Harlan Hebe	Petaluma	PreL. 41	AlphaTauOmega
Dysinger, Earl Scott	Fullerton	Econ. 75	NorthPaloAlto-p
Earl, Harley J.	Los Angeles	PreL. 30	Phi Delta Theta
Easterday, Robert Oscar	Palo Alto	Chem. 101	578 Lowell-p
Eastman, Joseph Houston	Berkeley	PreL. 43	Sigma Chi
Eaton, Dorothy	Palo Alto	Greek 45	431 University-p
Eberhart, Roland Fred	San Jose	Engl. 101	70 Encina
Eckhart, Charles W., Jr.	Los Angeles	Span. †8	Alvarado Hall
Edgar, Hazel Beatrice	Imperial	Hist. 9	Delta Gamma
Edwards, Elizabeth	Palo Alto	Hist. 99	707 Melville-p
[2]Edwards, Eunice Irene	Forsyth, Mont.	Econ. †	53 Roble
Edwards, Helen Margery	Palo Alto	Zool. 77	627 Homer-p
Edwards, Mayowen	Pasadena	Engl. 46	Gamma Phi Beta
[2]Edwards, Muriel Emma	Wallace, Ida.	Engl.	5 Roble
Edwards, Raymond Earl	Fullerton	Hist. 74	176 Bryant-p
Egbert, Dorothy Barnes	San Francisco	Ent. gr.	Alpha Phi
A. B., Stanford, 1916.			
Ehrenclou, Alfred H.	San Francisco	Med. gr.	1301 Page, SF-sf
A. B., Stanford, 1914.			
Eickhoff, Henry, Jr.	San Francisco	PreL. 40	Sigma Chi
Eiskamp, Ehler Henery	Palo Alto	Phyl. 42	446 Forest-p
Elden, John Francis, Jr.	Los Angeles	Law 120	Alvarado Hall
[1]Eldred, Fred Huestis	Los Angeles	Chem. gr.	178 Encina
B. S., Occidental, 1914; A. M., Stanford, 1916.			
Ellias, Laura Lillian	Glendale	Engl. gr.	83 Roble
A. B., Stanford, 1915.			
Elliott, David Coit	Stanford Un.	Econ. 54	5 Cabrillo

Elliott, Harold Farley Prescott, Ariz. M. E. 116 160 Encina
Elliott, Julian San Mateo Lat.gr. 231 VillaTer.,SM-sm
A. B., Vanderbilt, 1910.
Ellis, Agler Boalt Stockton PreL. 22 515 Waverley-p
Ellis, Leland Wadsworth Bakersfield Phyl. 74 172 Encina
Ellison, Phyllis Margaret Woodland Engl. 73 Pi Beta Phi
Ellsaesser, Fred Palo Alto Chem. gr. 328 Lytton-p
A. B., Stanford, 1912.
Elmer, Erle Lewis San Jose Chem.11 24th&William,SJ-sj
Elsey, Florence Starr Palo Alto Hist. 74 637 Gilman-p
Elsey, George Wendell Palo Alto M. E. 109 198 Encina
Elsey, Howard McKee Palo Alto Chem. gr. 734 Middlefield-p
A. B., Stanford, 1914, A. M., 1915.
Emerson, Ethel Eunice MountainView Educ. 69 33 Roble
Emery, Allen Lee Portland, Ore. Law 70 Phi Kappa Psi
Endersby, Victor Arthur Ukiah C. E. 115 College Terrace
Endres, Herbert A. Los Angeles Chem. 10 40 Encina
Engels, Emil Edward Seattle, Wn. Econ. 75 52 Encina
English, Floyd Everett Cupertino Law 71 105 Byron-p
English, Henry Rowland Stanford Un. Econ. 101 35 Encina
Enke, Melinda Portland, Ore. Lat. 104 Delta Gamma
Eppich, Elinor Marie Denver, Colo. Engl. 11 27 Roble
Erb, Arthur Leslie Tacoma, Wn. Law 138 Sigma Alpha Ep.
Ercanbrack, Sterling Morgan Provo,U. PreL. 55 202 Encina
Erich, Ezra Edward San Jose Min. 37 546 N. 4th, SJ-sj
[1]Erich, William John San Jose Min. sp. 546 N. 4th, SJ-sj
Erickson, Arthur Samuel Los Altos Hist. sp. 42 Los Altos-l
Estcourt, Doris Elfrida San Francisco Engl. 46 62 Roble
Estcourt,VivianFitzGeorge SanFrancisco M. E. 47 13 Encina
Estes, Carlton Chase Longmont, Colo. Econ. 12 4 Salvatierra
Eubank, Grace Elizabeth Wilmington Engl. 48 KappaKappaGam.
Eustace, Marie Genevieve PacificGrove Ger. gr. 427 Webster-p
A. B., Stanford, 1914.
[1]Evans, Emlyn H. Johnstown, Pa. Law 58 8 Encina
Evans, Errol Southworth Riverside M. E. 142 Theta Xi
Evans, Harry Frederick Saratoga M. E. 35 Saratoga-s
Evans, Margaret Reese Palo Alto Zool. 74 831 University-p
Evans, Ralph Ream Spokane, Wn. Econ. 13 459 Hamilton-p
Evans, Samuel Anthony San Diego C. E. †7 1750 Emerson
[2]Evans, Samuel Jr. Oak Park, Ill. M. E. 13 AlphaTauOmega
Evenson, Franklin F. Clatskanie, Ore. M. E. 15 126 Encina

Evenson, Willard Taylor	Clatskanie, Or.	Law 84	126 Encina
Everett, Ewing	Columbia, Tenn.	PreL. 15	630 University-p
[2]Everett, Harold Ellis	San Mateo	Econ.	Alpha Tau Omega
Everson, Susie May	Palo Alto	Ger. gr.	310 High-p
A. B., Stanford, 1915.			
[1]Ewing, Theodore Girard	Exeter	Min. 2	403 Alma-p
Eyer, William Knowlton	Los Angeles	Econ. 66	Phi Gamma Delta
Fabling, Harry Creed	Denver, Colo.	C. E. 97	Alvarado Hall
Faitoute, Florence Benedict	Hanford	Engl. 107	21 Roble
Falk, Theodore	Boise, Ida.	PreL. 49	88 Encina
Fansler, Henry Dwight	Wayne, Pa.	Econ. 16	Alvarado Hall
Faries, Culbert William	Los Angeles	Math. 106	2 Salvatierra
Farrar, Irwin Elmer	Corona	Law 95	840 Bryant
Farrell, Amy Lenora	Salt Lake City, U.	Fr. 108	45 Roble
Farrell, Raymond	Palo Alto	Law 50	Boyce Ave.
Farrer, Leland Joseph	Provo, U.	Econ. 75	158 Encina
Farris, Fauna Wynne	Palo Alto	Engl. sp. 104	315 Everett-p
Fast, Lisette Emery	Silverton, Colo.	Engl. 14	1147 Ramona-p
Fearney, Mary Elizabeth	Los Angeles	Engl. 62	12 Roble
Felberbaum, William	Portland, Ore.	Phyl. sp. 44	729 Emerson-p
Felt, Tom B.	Los Angeles	M. E. 41	Acacia
Fenlason, Clayton Orin	Raymond, Wn.	PreL. 12	15 Alvarado
Fergus, Floyd	Anaheim	M. E. 42	147 Emerson-p
Ferguson, Donald Kelly	San Diego	Econ. 49	Phi Delta Theta
Ferguson, Vance Thomas	Portland, Ore.	Econ. 6	Beta Theta Pi
Ferris, Gordon Floyd	Modesto	Ent. 110	194 Encina
Fesler, Rachel	Duluth, Minn.	Hist. 44	Delta Gamma
Fesler, Ruth	Duluth, Minn.	Hist. 44	Delta Gamma
Field, Fred Seymour	Los Angeles	PreL. 48	Cooksey Lodge
Field, Oliver C.	Vallejo	M. E. 77	AlphaTauOmega
Field, William Richards	San Jose	Phyl. 35	Delta Tau Delta
[1]Figg-Hoblyn, Arthur W.	SantaBarbara	Law 104	140 Encina
[1]Filley, Louis Jay	So. Pasadena	Econ. sp. 17	Zeta Psi
Finney, Clara Eugenia	Modesto	Med. gr.	324 Emerson-p
A. B., Stanford, 1906.			
Fischer, William Louis	Sutton, Neb.	Econ.sp.12	561Middlefield-p
Fisher, Albert B.	Salt Lake City, U.	Law. 105	Phi Kappa Psi
Fisher, Carl Alvin	Salt Lake City, U.	PreL. 12	Phi Kappa Psi
Fisher, Hale Baker, Jr.	Palo Alto	PreL. 57	875 University-p
Fisher, Hazel Margreta	Penryn	Ger. gr.	26 Roble
A. B., Stanford, 1916.			

Fisher, Prudence Hale	Palo Alto	Span. 36	875 University-p	
[1]Fisher, Revere Paul	Fresno	Geol. 24	Sigma Alpha Ep.	
Fisher, Wilfred Balliet	Aurora, Ill.	Econ. 43	327 Hamilton-p	
[2]Fitzpatrick, James Peter	Los Angeles	Engl. †	Santa Clara-sc	
A. B., Santa Clara, 1915.				
Flack, Augustus Sloan	Los Angeles	Law gr.	Delta Chi	
A. B., Stanford, 1915.				
[2]Flanders, Jesse K.	San Francisco	Educ.gr.	261Octavia,S.F.-sf	
A. B., Bates, 1904.				
Flanner, John Howard	Blackwell, Wis.	Econ. †16	1319 Bryant-p	
Fleenor, Alice Leone	Oakland	Econ. gr.	24 Roble	
A. B., California, 1915.				
Fleming,James Douglas	San Bernardino	C. E. 51	Phi Gamma Delta	
Fletcher, Hal B.	Palo Alto	Phyl. 48	Acacia	
Fletcher, Harold Augustus	San Fran.	Med. gr.	2009 Pacific,SF-sf	
B. S., California, 1912.				
[1]Fletcher, Thomas W.	Pipestone, Minn.	Law sp.	Encina	
Fletcher, William Daly	Stanford Un.	C. E. 99	109 Encina	
[1]Flewelling,LeslieCovert	Needham,Mass.	C. E. †1	College Terrace	
Flint, John Donovan	Palo Alto	Law 120	841 Bryant-p	
Floete, Carl Elmore	Armour, S. D.	Econ. 8	12 Dolores	
Flood, Randolph Gove	San Francisco	Chem. 16	Phi Delta Theta	
Flood, Thomas Bernard	Tonopah, Nev.	C. E. 60	45 Encina	
Florence, Laura	Aberdeen, Scotland	Ent. gr.	5 Salvatierra	
M. A., Aberdeen, 1907, B. Sc., 1909.				
[1]Flowers, Evelyn Grace	Monrovia	Educ. 10	27 Roble	
[1]Flowers, Mary La Belle	Monrovia	Engl. 56	27 Roble	
[1]Flowers, Montaville D., Jr.	Monrovia	Hist. 44	25 Encina	
[1]Flügel, Ewald	Palo Alto	Engl. 6	1153 Cowper-p	
[2]Flügel, Felix	Palo Alto	Econ. gr.	1153 Cowper-p	
A. B., Stanford, 1914.				
Flynn, Francis Kildare	N. Platte, Neb.	E. E. 117	Theta Xi	
Fogel, Marguerite	Santa Monica	Ger. 75	Alpha Omicron Pi	
Forbes, Jennie Isabelle	San Mateo	Engl.37	420ElCam.Rl.,SM-s	
Forbes, Margaret Irving	Palo Alto	Ger. gr.	1739 Waverley-p	
A. B., Stanford, 1916.				
Ford, Edward Morris	Los Angeles	Law 44	Alpha Tau Omega	
Ford, Hugh Pillsbury	Eugene, Ore.	M. E. †6	Manzanita Hall-p	
Ford, Neal Kelly	Eugene, Ore.	M. E. †11	Manzanita Hall-p	
[1]de Forest, Clara Marie	Palo Alto	Econ. 83	950 University-p	
Foster, J. Bryan	Clarinda, Ia.	Econ. 16	435Embarcadero-p	

Foster, Parker Voorhees	Los Angeles	Econ. 13	Phi Delta Theta
Fout, Edmond Eugene	Palo Alto	Hist. 83	1021 Cowper-p
Fowler, John Shiveley	Redwood City	Min. 13	Redwood City-r
Fox, Byron Parlier	Seattle, Wn.	Geol. 101	825 Cowper-p
Frank, Lawrence Phillip	Los Angeles	Law 65	66 Encina
[2]Frankenfield, Lorraine	Los Angeles	Econ. †	68 Roble
Franklin, Lyman Trumbull	Cupertino	Econ. 10	Cupertino-c
Frederick, Stanton W.	Spokane, Wn.	PreL. 11	Phi Kappa Psi
Freed, Victor	Seattle, Wn.	Phyl. 49	169 Encina
French, Robert Harrison	Cleghorn, Ia.	Engl. sp. 13	205 Encina
Frey, Earle William	Placerville	M. E. 85	197 Encina
Fribley, John Willour	Ashland, Ohio	Econ. 113	405 Emerson-p
Fritsch, Rudolf Hermann	Palo Alto	Econ. 53	831 Kipling-p
[2]Fritzschen, H. Wilhelm	San Francisco	Phyl. sp.	The Alexandria-p
Frye, Henry Abraham	Berkeley	Econ. 77	59 Encina
Fukazawa, Umekichi	Los Angeles	Min. †35	Japanese Club
‡[1]Fuller, Evelyn S.	Washington, D. C.	Econ.	The Greene
Fuller, Glade George	Springboro, Pa.	C. E. †10	2 Salvatierra
Fundenberg, William C.	Pasadena	PreL. 8	16 Alvarado
Gage, Edmund Vernon	Palo Alto	Fr. gr.	230 Kellogg-p
A. B., Harvard, 1899; A. M., Pennsylvania State College, 1908.			
Gage, Paul S.	Oxnard	PreL. 36	Chi Psi
Gagos, Kurken M.	Fresno	M. E. 66	567 Melville-p
Gailfus, Lorna Margaret	Modesto	Lat. 48	52 Roble
Gaines, Paul	Monrovia	PreL. †9	93 Encina
Galliano, Frank James	Oakland	Hist. 35	200 Encina
Galpin, Ellen Tupper	Eagle Rock	Bot. †15	21 Roble
[1]Gamboni, Fred Alger	Stockton	C. E. sp. 11	53 Encina
Gangestad, Roy Sylvester	Los Angeles	PreL. 41	Delta Kappa Ep.
Ganong, Arthur Field	Portland, Ore.	Econ. 13	Sigma Alpha Ep.
Gansert, William Iles	Rock Island, Ill.	PreL. 42	The Greene
Gardiner, Joyce Ada	Santa Barbara	Zool. gr.	425 Florence-p
A. B., Stanford, 1915.			
Gardiner, Lucius Dean	Long Beach	PreL. 49	Delta Chi
Gardner, Laurence Dickinson	Ventura	Chem. 72	122 Encina
[1]Gardner, William Lloyd	San Jose	Chem. 52	Encina
Garfias, Valentine R.	MexicoCity,Mex.	M. E. gr.	515 University
A. B., Stanford, 1907, A. M., 1912.			
Garliepp, William Louis	Mtn. View	Ent. 39	Mountain View-m

‡Deceased, September 22, 1915.

Garrett, Robert Harmon	Cleveland, O.	Econ. 15		Chi Psi
Garsed,GwendolenHarriet	StanfordUn.	Engl. 45		Pine Cottage
Gartzmann, Pauline	San Diego	Engl. gr.	19	Salvatierra
A. B., Stanford, 1908.				
Garwood, Alda Ann	Mayfield	Econ. 94	346	Harvard,M-m
[1]Gates, Albert Peter	Pasadena	Econ. 5		Zeta Psi
Gazlay, Frank Andrews	San Diego	Law 63		Kappa Alpha
Geistweit, William H., Jr.	San Diego	Phyl.-Med.	104	6 Encina
Gentry, Ira Howard	Cottonwood, Ida.	PreL. 6		16 Alvarado
Gerwin, Adanell Lorriene	Redwood City	Educ. 8		Redwood City-r
Ghrist, Orrie E.	Ames, Ia.	Phyl. 72		Beta Theta Pi
[1]Gibbel, Naum Winfield	Berkeley	M. E. 73		Encina
Gibbs, Doris Jean	Pasadena	Engl. 11		38 Roble
Gibson, Edgar George	SaltLakeCity,U.	Econ. 63		Phi Kappa Sigma
Gibson, Florian Greenleaf	Palo Alto	Min. 10		833 Hamilton-p
[1]Gibson, Paul Brier	Palo Alto	PreL. 3		167 Lytton-p
Gibson, Wm. Henry	Salt Lake City, U.	Econ. 45		Phi Kappa Sigma
Gifford, Myrnie Ada	Randolph, Vt.	Med. gr.		324 Emerson
A. B., Mt. Holyoke, 1915.				
Gilbert, Marion	Montrose, Colo.	Hist. 47		AlphaOmicronPi
Gilbert, Rea	Montrose, Colo.	Psych. 68		AlphaOmicronPi
[1]Gilchriste, Aida Christine	San Mateo	Engl. 22	105	Tilton,SM-sm
Gillespie, Bartlett Whitmer	Santa Maria	M. E. 40		24 Encina
Gillespie, Jack Morgan	Palo Alto	PreL. 19		N.PaloAlto rd.-p
Gillett, Lorenzo Rowe	Sterling, Colo.	Econ. †10		18 Alvarado
Gillies, Don	Alhambra	Phyl. 46		143 Encina
Gilliland, Otho James	Altoona, Pa.	Bot. 108		Campus School
Gilroy, William	Santa Monica	Law 59		Chi Psi
Girdner, Margaret Virinda	Sacramento	Hist. gr.		Alpha Phi
A. B., Stanford, 1915.				
Gladstone, Dwight Beckwith	Palo Alto	M. E. 78	603	Waverley-p
[1]von Glahn, Anne Luella	Ripon	Lat. gr.	324	Emerson-p
A. B., College of Pacific, 1914.				
[2]Glikbarg, Abner Sam	Oakland	PreL.		Alvarado Hall
Goetjen, Floyd L.	Dawson, Y.T.,Can.	PreL. 12		18 Alvarado
[1]Goff, Clifford	Flat Rock, Ill.	M. E. 79	334	Homer-p
Goldberg, Edward	Washington D. C.	Educ. 74		118 Encina
Golden, Abram Lee	Billings, Mont.	Law gr.		454 Forest-p
A. B., Colorado, 1913.				
Goldsmith, Arthur A.	Los Angeles	Law gr.		205 Encina
A. B., Stanford, 1916.				
Goldstein, Joseph	Sacramento	Phyl. 46		17 Encina

Goldstein, Matt	Sacramento	PreL. 15	College Terrace
Gonzaga, Jose C.	Rio deJaneiro,Brazil	C. E. †5	Stanford Union
Gonzales, Carlos A.	Diriamba,Nic.,S.A.	M. E. 40	635 Bryant-p
Gonzales, Francisco Leopoldo	San Jose	Phyl. 24	College Terrace
Goodman, John Harvey	Berkeley	Econ. 105	Delta Kappa Ep.
Goodwin, Norris	Redwood City	Chem. 6	Phi Kappa Psi
Goodwin, Paul McCully	Riverside	Chem. 85	Theta Xi
[1]Goplerud, Clifford Peter	Osage, Ia.	C. E. gr.	Osage, Ia.
A. B., Stanford, 1915, Engineer, 1916.			
Gores, Walter Winthrop J.	Los Angeles	Graph. 75	67 Encina
[1]Gossett, Earl Murray	Palo Alto	PreL. 4	177 Tasso-p
Graham, Chalmers George	Palo Alto	PreL. 49	1118 Emerson-p
Graham, Frances Boswell	Pomona	Hist. gr.	Kappa Alpha Th.
A. B., Stanford, 1915.			
Graham, Helen Marie	Seattle, Wn.	Greek 108	419 Florence-p
Graham, Lloyd Edgar	Sacramento	M. E. 12	4 Lasuen
Grant, Richard Harry	Portland, Ore.	Law 57	Phi Gamma Delta
Grant, Wilma	Sparta, Ill.	Chem. 38	Alpha Phi
Grathwell, Samuel W.	Cincinnati, O.	Econ. †13	11 Salvatierra
Graveley, Martha	Boise, Ida.	Fr. 12	13 Madrono
Graves, John Maddux	San Francisco	Phyl.-Med. 106	Chi Psi
Gray, George Donald	Pueblo, Colo.	Greek 41	611 Bryant
Gray, John	Ukiah	Ent. 70	405 Emerson-p
[1]Green, Charles Dudley	Long Beach	PreL. 46	Delta Chi
Green, Faith Amy	Pasadena	Hist. †	30 Roble
[1]Green, George Homer	Petaluma	C. E. 2	92 Encina
[1]Green, George William	Long Beach	Law †	Chi Psi
Green, Gladys	Redlands	Engl. 47	2 Madrono
Green, Waldron A.	Pasadena	Geol. 99	Delta Upsilon
Greene, Claudia Lloyd	SaltLakeCity,U.	Engl. †11	Sigma Kappa
Greening, Helen Kathleen	Los Angeles	Lat. 69	Delta Delta Delta
Greer, Margaret	San Jose	Math. 12	643 S. 2d, SJ-sj
[1]Greve, Frank Henry	Hollywood	PreL. 24	Phi Delta Theta
[2]Grieb, Roland Kline	Glenside, Pa.	Law †	232 Lytton-p
Griffin, Albert Devereaux	Los Angeles	C. E. 93	35 Encina
Griffin, Raymond E.	Palo Alto	Bot. 12	729 Waverley-p
Griffin, Raymond Rudolph	Salinas	Law 73	Delta Chi
Griffin, Robert Allen	SantaMonica	Engl. 57	16 Salvatierra
[1]Griswold, Jos. W.	ShelburneFalls,Mass.	M. E. 23	18 Alvarado
Grosdidier, Earl	Atchison, Kan.	PreL. 14	183 Lytton-p
Gross, Wilmer Jackson	San Jose	Econ. 109	1441 Alameda,SJ

Grounds, Effie	Fresno	Hist. 107	Chi Omega
Grove, Ruth Frisbie	Palo Alto	Phyl. 10	363 Melville-p
Gunn, Milton Curtiss	Helena, Mont.	Law 95	Phi Kappa Sigma
[2]Gunn, William	Berkeley	Econ.	627 Bryant-p
Guthrie, Esther Lee	Woodland	Ent. gr.	5 Salvatierra
A. B., Stanford, 1915.			
Hadden, Fannie	Palo Alto	Chem. 83	1157 Ramona-p
Haddock, Darwin E.	Bloomington,Ida.	PreL. 12	704 Bryant-p
Hafer, Joseph Bursk	San Diego	PreL. 50	Delta Chi
Haffner, Georgia	Venice	Econ. 109	GammaPhiBeta
[1]Hagadorn, Paul Priest	Los Angeles	Phyl. 8	840 Bryant
Hahn, Herbert Leonard	Pasadena	Law 97	176 Encina
Haig, Raymond Thomas	San Jose	Phyl. 45	64Magnolia,SJ-sj
Haines, Wilbur Heath	Oakland	Geol. 27	Theta Delta Chi
Hake, Benjamin F.	Worland, Wyo.	Geol. 43	43 Encina
Hale, Ruby Virginia	Ross	Engl. 13	875 University-p
Haley, Virgil Ernest	San Jose	PreL. 46	2 Salvatierra
Hall, Clarence Rector	Mt.Vernon,Wn.	Chem. 43	30 Encina
[2]Hall, George William	Pasadena	Chem.	11 Salvatierra
[2]Hall, Herbert Russell	Palo Alto	Econ.	653 Melville-p
Hall, James Hanna	San Mateo	Chem. 14	San Mateo-sm
Hall, Jean Ethel	Santa Monica	Math. 44	Pi Beta Phi
Hall, Lucy Alice	Palo Alto	Fr. 80	346 Waverley-p
Hall, Muriel E.	San Mateo	Graph.gr.	29Bayw'd,SM-sm
A. B., Stanford, 1916.			
Hall, Myron Crawford	Palo Alto	Engl. 34	346 Waverley-p
Hall, Norma Pierce	Hollywood	Engl. 38	Delta Gamma
[2]Hall, Spencer	San Jose	M. E.	Delta Tau Delta
Hall, Winslow Gladwin	San Mateo	M. E. 12	Burlingame-b
Halsted, Samuel Thompson	Riverside	C. E. 85	Beta Theta Pi
Ham, William Thomas	Los Gatos	Engl. gr.	660 Waverley-p
A. B., College of Pacific, 1913.			
Hamaker, Rex Gerome	Los Angeles	C.E. 104	Phi Gamma Delta
[1]Hamilton, Robert Cecil	Pasadena	Hist. gr.	1200 Emerson
A. B., Stanford, 1912.			
Hamlin, Harris Howard	Los Angeles	PreL. 15	Alvarado Hall
Hamlyn, Geraldine Mary	SanFrancisco	Hist. 76	Pi Beta Phi
Hammel, John Calvin	Ontario	Law 122	33 Encina
Hammett, Harry Rice	Redlands	M. E. 80	31 Encina
Hammon, Glenn A.	San Francisco	Math. 52	Phi Delta Theta
Hammond, George R.	Roseburg, Ore.	M. E. 47	College Terrace

Hammond, Philo Fay	Palo Alto	Phys. gr.	467 Everett-p
A. B., Washington, 1907.			
Hampton, Fred George	Hardwick	M. E. 110	313 Kipling-p
[1]Hancock, Beatrice Margaret	Riverside	Hist. †77	Delta Gamma
Hancock, Morris W.	Mankato, Minn.	Educ. gr.	431 Kipling-p
A. B., Carleton, 1915.			
Hanf, Hobart Whittier	SanBernardino	M. E. 13	Theta Xi
Hankins, John Lester	Tucson, Ariz.	PreL. 33	Phi Gamma Del.
Hanna, Dorothy Edwina	Los Angeles	Hist. 14	KappaKappaGam.
Hanna, Maynard Basil	Fresno	Law sp. 104	193 Encina
Hannibal, Edna Anne	San Jose	Zool. gr.	24 Roble
A. B., Stanford, 1915.			
Hardy, Conrad Palmer	Dawson, Can.	C. E. 103	166 Encina
Harkins, Paul Franklin	Ashland, Ohio	Phyl. 48	Alpha Tau Omega
Harper, Earl Ramond	Los Angeles	Law 9	91 Encina
[2]Harrington, Donald S.	Leetonia, O.	Econ. 25	2 Salvatierra
Harrington, Edward W.	San Rafael	Hist. 46	310 High-p
Harrington, Leo Walter	Tonopah, Nev.	Law 93	14 Encina
Harris, Benjamin Arthur	Menlo Park	PreL. 16	Menlo Park-m
Harris, Hugh Emison	Princeton, Ind.	Econ. 77	634 Hamilton-p
[1]Harris, Ino Lloyd	Napa	Ent. †10	Phi Kappa Sigma
Harris, Melville David	Modesto	Econ. 14	Alvarado Hall
Harris, Ronald Biddle	Fresno	Law 55	Chi Psi
Harrison, George Russell	Halcyon	Phys. 13	1044 Bryant-p
[1]Hart, Alfred W.	Aberdeen, Wn.	Econ. 32	Phi Delta Theta
Hart, Harry Pendleton	So. Pasadena	C. E. 101	132 Encina
Hart, Lynn Newton	Berkeley	Med. †	2211 Grant, Berk.-b
Hartshorn, J. Lentzy	Hoquiam, Wn.	Phyl. 8	Univ. Park
Hartshorn, Llewellyn P.	Hoquiam,Wn.	Chem. 14	Univ. Park
Hartwell, Hazel Louise	San Diego	Math. 104	AlphaOmicronPi
Harvey, Edith Isbell	Fresno	Econ. 44	Alpha Phi
Harvey,HenryRakestraw	Phoenix,Ariz.	Econ. 66	83 Encina
Hashiba, George K.	San Francisco	Med. gr.	1869 Pine, SF-sf
A. B., Stanford, 1915.			
Haskett, Amy	Fort Bragg	Engl. gr.	324 Emerson-p
A. B., College of Pacific, 1913.			
Hastings, Harlow H. A.,Jr.	Seattle, Wn.	Law 128	Delta Kappa Ep.
Hastings, James Uhler, Jr.	Oakdale	Law 65	Alpha Tau Omega
Hatch, Chesley Warde	Modesto	Econ. 94	Delta Tau Delta
Hatch, Raymond Ephraim	Modesto	Econ. 9	Delta Tau Delta
Hauser, Henry Paul	San Francisco	Econ. 29	120 Encina

Hawks, Kenneth Neil	Glendora	Econ. 15	Delta Kappa Ep.
Hawley, Donald Adams	Oakland	C. E. 64	Sigma Nu
Hawley, George William A. B., Stanford, 1913.	Manteca	C. E. gr.	Manteca-m
Hawley, Henry James	Portland, Ore.	Geol. 121	157 Encina
[2]Hayden, Marcella	Los Angeles	Hist. 31	Gamma Phi Beta
Haydock, Evelyn Gladys	San Jose	Math. 106	487 N. 5th, SJ-sj
Hayes, Allan Sidney	Pasadena	Geol. 88	Zeta Psi
Hayes, Elystus Lyon	Edenvale	Law 103	Phi Delta Theta
Hayes, Eugene	Pasadena	Econ. 53	AlphaTauOmega
[1]Hayes, Loy Bassett	Edenvale	Econ. 4	The Greene
Hayes, Percy Julian	E. Bakersfield	Econ. 101	172 Encina
Hayward Charles Sherman	Los Gatos	Graph. 41	Los Gatos-lg
[2]Hayward, Edna A. B., Stanford, 1910.	Redwood City	Ger. gr.	Redwood City-r
Hayward, Max Everett	Los Angeles	Econ. †12	141 Encina
[2]Hayward, Samuel T. A. B., Stanford, 1915.	Los Angeles	Law gr.	159 Encina
[1]Hazlett, Margaret Elva A. B., Stanford, 1916.	Reno, Nev.	Fr. 125	Delta Delta Delta
[1]Hazzard, Carroll Camper	Whittier	PreL. 37	Delta Chi
Heald, Elmer Wilson A. B., Stanford, 1914.	Palo Alto	Law gr.	554 Hawthorne-p
Heard, Ralph T.	Ft.Sam Houston,Tex.	Math. 14	The Greene
Hearle, Percy, H. H.	St. Louis, Mo.	Phyl. 44	19 Encina
[1]Heaton,Laurence G. A. B., Stanford, 1916.	Poughkeepsie,N.Y.	Chem. 120	310 High
Hefflefinger, Orval Jewel	Tulare	Law 99	82 Encina
[1]Heinsch, Rupert Lloyd	Los Angeles	Econ. sp.	Kappa Sigma
Heintz, Ralph Morell	San Jose	Chem. sp. 12	399 S.2d,SJ-sj
Helmick,WalterEdmund	Helena,Mont.	M. E. 40	70 Encina
Helsley, Gordon Frederick A. B., Stanford, 1915.	Fresno	Med. gr.	2102 Calif., SF-sf
[1]Henck, Edward W., 2d	Santa Barbara	C. E. 1	435 Cowper-p
[2]Hendershot, Vernon E.	Berkeley	Ger. †	2155 Center,Berk.-b
[2]Henderson, Charles Edward	Piedmont	Econ.	Sigma Alpha Epsilon
Henderson, Edward A. B., Stanford, 1916.	Santa Paula	Law gr.	115 Encina
Henderson, Hugh Murphy A. B., Stanford, 1915.	Monrovia	M. E. gr.	18 Alvarado
Henn, Marion Mona	Oroville	Engl. 13	Pi Beta Phi
Henry, Kenneth Malcolm	Livermore	Chem. 44	193 Encina

Hensel, George Carl	Eureka, U.	Phyl. 63	184 Encina
Henshaw, Millett	Evansville, Ind.	Lat. gr.	660 Waverley-p
A. B., Colorado, 1915.			
Herdman, Ruth	Palo Alto	Educ. 6	935 Cowper-p
[2]Herold, Stanley Carrollton	San Jose	Geol. gr.	Acacia
A. B., Stanford, 1909.			
Heron, Ivan Clyde	Watsonville	Phyl. 50	180 Encina
Herring, Harry Lehman	Long Beach	PreL. †	Kappa Alpha
[2]Herron, Laura Elizabeth	Palo Alto	Educ. gr.	105 Emerson-p
A. B., Stanford, 1914.			
Hertel, Herbert Rudolph	Pasadena	Econ. 48	Zeta Psi
Hess, Gordon Cumming	Easton	C. E. 11	Easton-e
Heth, Henry Hardy	Montpelier, Ohio	PreL. 17	245 Ramona
[1]Hettinger, Albert John, Jr.	Fowler	Econ. 110	Faculty Club
Hews, Hayden Lewis	Riverside	Law 80	104 Encina
Higgins, Robert Valentine	Santa Maria	Engl. gr.	154 Encina
A. B., Stanford, 1916.			
Higgins, Ward Frank	Alameda	Law 71	Kappa Sigma
Higley, James Stephen	Phoenix, Ariz.	Law 63	Chi Psi
[1]Hihn, Teresa Agnes	Santa Cruz	Engl. 6	28 Madrono
Hilgen, Herbert John	Los Angeles	Econ. 8	49 Encina
Hill, Ashley Provine	Columbia, Tenn.	M. E. 12	630 University-p
[1]Hill, Charles Albert	Moline, Kan.	Law gr.	155 Encina
A. B., Stanford, 1913.			
Hill, Elsa Hempl	Palo Alto	Bact. gr.	203 Addison-p
A. B., Stanford, 1915.			
[2]Hill, Frank Ernest	Palo Alto	Engl. gr.	203 Addison-p
A. B., Stanford, 1911, A. M., 1914.			
Hill, Marion	Los Angeles	Math. †8	Kappa Alpha Th.
[2]Hillard, Robert Cushing	Palo Alto	Chem. †	229 Byron-p
Hills, Harry Sawyer	Oroville	Econ. 89	146 Encina
Hills, William Leslie	Los Altos	M. E. 13	Theta Delta Chi
[1]Hilmer, Hermann Johann	Palo Alto	Econ. gr.	583 Ramona
A.B., Michigan, 1904; A.M., Columbia, 1905; Ph.D., Stanford, 1912.			
Hinchliffe, Margaret Purvis	Campbell	Graph. 43	22 Roble
[2]Hinds, Joe Henry	Porterville	C. E. 97	512 Lytton-p
Hinkle, Lucile Bernice	San Diego	Graph. 75	2 Madrono
Hinton, Frederick T.	Los Angeles	PreL. 28	Phi Gamma Delta
Hirao, Ren	Hyogo-Ken, Japan	Econ. 107	733 Ramona-p
Hiratsuka, Saburo	Los Angeles	Econ.105	281Embarcadero-p
[1]Hitchcock, John Albert	Monterey	Phyl. 10	College Terrace

Hively, Vera Grayce	Coalinga	Engl. 106	8 Madrono
Hobbs, Charles Steinmetz	Fresno	Econ. 16	Sigma Nu
Hobson, Francis Jos., Jr.	Long Beach	Chem. 60	Theta Xi
Hobson, Frank Alfred	Springbrook, Ore.	Min. 39	116 Encina
Hobson, Harry Townsend	Long Beach	Geol. 63	Theta Xi
Hodapp, Cullom Sebastian	Oakland	Econ. 45	11 Encina
Hodges, George Charles	Palo Alto	Hist. 97	451 Channing-p
Hoefgen, Lena Brooks	Palo Alto	Graph. 108	221 Byron-p
Hoernig, Ottilie Katharine A. B., Stanford, 1915.	Mtn. View	Ger. gr.	Mountain View-m
Hoever, August Joseph	Willows	C. E. 56	Theta Delta Chi
Hoffman, Hallock Egelston	Pasadena	Econ. 47	Delta Tau Delta
[1]Hoffmire, Ray DeMuth	Portland, Ore.	Chem. 6	415 Lytton-p
Holcomb, Clare	Boise, Ida.	Hist. 70	Sigma Kappa
Holden, Edward Chester	San Dimas	PreL. sp. 14	18 Alvarado
Holland, John Connell	Roswell, N. M.	Law unc. 85	718 Bryant-p
Hollister, Ida Gertrude	San Luis Obispo	Fr. 76	Kappa Kappa Gam.
Holloway, Edith Hilda	Helena, Mont.	Hist. 120	63 Roble
Holloway, Godfrey Ernest	Helena, Mont.	Min. 74	183 Encina
Holman, Frances	Palo Alto	Greek 11	558 Lincoln-p
[2]Holman, Ritter	Pacific Grove	Econ. †	Phi Kappa Psi
Holmes, Milton Lyle	Hilo, Hawaii	Econ. 73	18 Alvarado
Holmes, Wm. Henry	Roseburg, Ore.	C. E. 12	704 Bryant-p
Holt, James Martin	El Centro	PreL. 12	Delta Tau Delta
[1]Holtham, Earl Albert	Modesto	PreL. †7	Phi Kappa Psi
Honens, Wm. H.	Calgary, Alberta, Can.	Econ. 12	Alpha Tau Omega
Honey, John Kohnen	Gresham, Ore.	Econ. 42	The Greene
[1]Hooker, Ora Whitley A. B., Stanford, 1915; A. M., 1916.	Los Angeles	Educ. gr.	San Carlos-sc
Horner, William Foster	Honolulu, T.H.	Econ. 67	358 Homer
Horton, W. Ogden	Newcastle, Wyo.	Phyl. 13	Sigma Chi
Hoskins, Dorothy Helen	Oakland	Engl. 13	Sigma Kappa
Hotchkiss, Irma Helen A. M., Northwestern, 1913.	Evanston, Ill.	Econ. gr.	29 Salvatierra
Hough, Edward Stamford	Oakland	PreL. 47	Delta Tau Delta
Hough, Ethel Robb	N. Yakima, Wn.	Psych. 27	69 Roble
Hough, Walter Seneff	Madera	Ent. 45	446 Hamilton-p
House, Meredith J.	Riverside	Econ. 14	Beta Theta Pi
Howard, Ernest Clyde	Ventura	C. E. †7	25 Encina
Howard, Graeme Keith	Stanford Un.	Econ. 72	Delta Tau Delta
Howard, Lowry Samuel	Mica, Wn.	Educ. †14	Veblen Cottage

Howe, Avery John	Palo Alto	Law unc. 68	861Channing-p
Howe, Charles Dudgeon	Denver, Colo.	M. E. 15	426 Florence-p
Howe, L. Frances	Long Beach	Chem. 74	Gamma Phi Beta
Hubbard, Adolph Herrmann	San Jose	C. E. 47	116 Encina
Hubbard, Charles	San Francisco	M. E. sp. 7	Acacia
Hubbard, Gordon Alden	Palo Alto	C. E. 43	629 Forest-p
Hubbs, Carl L.	Los Angeles	Zool. 104	144 Encina
Hudner, Amelia	Hollister	Span. gr.	Pi Beta Phi
A. B., California, 1915.			
Hudson, Robert Smith	Goshen, Ind.	PreL. 9	Phi Delta Theta
Huff, Frances Lucile	Palo Alto	Econ. 11	475 Melville-p
Hughes, Glenn Arthur	Long Beach	Educ. 100	661 Gilman
Hulsman, Ivan M.	Susanville	Geol. 117	Phi Kappa Sig.
Hume, Dorothy	Los Gatos	Fr. 70	17 Madrono
Humphries, Florence Yost	Palo Alto	Engl. gr.	521 Everett-p
A. B., Cornell, 1888.			
[1]Humphry, Cora Viola	Cupertino	Hist. gr.	Cupertino-c
A. B., Stanford, 1915.			
Humphry, Eldon Eldred	Cupertino	C. E. 11	Cupertino-c
Hunt, Jessimine Mabelle	Stanford Un.	Engl. 96	3 Salvatierra
[2]Hunt, Merritt Gates	Boulder, Colo.	Chem. gr.	18 Alvarado
A. B., Stanford, 1915.			
Hunt, William Rowsell	Elko, Nev.	Law 75	10 Encina
Hunter, Clarence Lester	Redlands	Phyl. 64	Theta Delta Chi
Hunter, Leroy Allen	Spokane, Wn.	Econ. 13	Phi Kappa Psi
[1]Huntington, Frances	Los Altos	Engl. 120	Los Altos-l
A. B., Stanford, 1916.			
Huntington, Katharine	Los Altos	Ger. 11	Los Altos-l
Huntsberger, Raymond W.	Los Angeles	Phyl. 13	Kappa Sigma
Hurley, Charles C.	Albion	Engl. 8	204 University-p
[2]Hurley, Jere E.	Albion	Hist.	310 High-p
Hurley, Morris Elmer	Albion	Ger. gr.	310 High-p
A. B., Stanford, 1915.			
Hussey, Horace Hadley	Faith, S. D.	Law †28	131 Encina
Hutchinson, Arthur John L.	Palo Alto	Chem. 48	Phi Kappa Psi
Hutchinson, Arthur Stanley	San Fran.	Law sp.unc.37,	955Pine,SF-s
Hutchinson, James Sloan	Palo Alto	Econ. 98	403 Kingsley-p
Hutchinson, Katharine	Palo Alto	Ger. 107	403 Kingsley-p
Hyatt, Antonia	Sacramento	Chem. 49	Kappa Alpha Th.
Hyatt, Victor	Sacramento	Law 111	168 Encina
Ichihashi, Shizuko	Palo Alto	Bot. 105	1010 Emerson-p

[2]Ingels, Edna Esther	Fresno	Engl. †	5 Roble
[1]Ingram, Wyatt Hawkins	San Jose	Math. 78	45 Encina
Iredell, Harry H.	Long Beach	M. E. †11	16 Alvarado
Irvine, James	Los Angeles	M. E. †30	Theta Xi
Irwin, Clifton Minto	Portland, Ore.	C. E. 107	Chi Psi
[1]Jabelmann, Otto	Cheyenne, Wyo.	M. E. sp. 2	Acacia
Jackson, Alfred John	Morgan Hill	Econ. 8	168 S. 2d, SJ-sj
Jackson, Charles Donald	Evanston, Ill.	Econ. 14	29 Salvatierra
Jacomini, Clement	Pasadena	M. E. 14	37 Encina
Jacomini, Gustave Adolph	Pasadena	C. E. 118	134 Encina
Jameson, Bernice	Corona	Med. gr.	2504 Sacto.,SF-sf
A. B., Stanford, 1915.			
Jameson, Carol Edna	Corona	Chem. 92	62 Roble
Jameson, Hetty Joy	Corona	Hist. 44	61 Roble
Jamieson, Roger Mills	Santa Monica	PreL. 44	Phi Kappa Psi
Janney, Verne William	Los Angeles	Econ. 5	Delta Tau Delta
Janssen, Edward A., Jr.	San Francisco	C. E. 10	Cardinal Club
Jardine, Robert Edward	Hollywood	Econ. 8	Delta Kappa Ep.
Jeffers, John Nace	Los Angeles	C. E. 45	Delta Upsilon
Jefferson, Edward Milton	Inglewood	Educ. 13	532 Homer-p
Jenison, Austin	Lansing, Mich.	Bot. †15	18 Alvarado
Jenkins, Henry Stewart	Pittsburg, Pa.	Min. 1	Theta Xi
Jenkins, Leonard R.	Ogden, Utah	Med. gr.	2624 Calif., SF-sf
A. B., Stanford, 1913.			
Jennings, Edward B.	Salt Lake City, U.	M. E. 9	18 Alvarado
Jensen, Harold Lund	San Francisco	Med. 150	SF Hosp., SF-sf
Jensen, Norman Ramsey	Santa Monica	Law 81	Sigma Nu
[1]Jepsen, Ada Elise	Los Angeles	Hist. 69	Sigma Kappa
Jertberg, Gilbert Henry	Chino	PreL. 12	1011 Fulton-p
[1]Job, Martha Judith	Mountain View	Engl. gr.	R.F.D.17,MV-mv
A. B., Stanford, 1915, A. M., 1916.			
Johannsen, Alfred	Corte Madera	Chem. 14	Theta Xi
Johns,HenryVanDyke,Jr.,	SanFrancisco	PreL. 35	Delta Kappa Ep.
Johnson, Arthur Lockwood	San Jose	Law 113	381 N. 13th, SJ-sj
Johnson, Donald W.	Fairmont, Minn.	Phyl. 34	Chi Psi
Johnson, Geneva	Palo Alto	Lat.gr.	HamiltonAv.Ext.-p
A. B., Whittier, 1915.			
Johnson, Henrick Walter	Sausalito	M. E. 40	16 Alvarado
Johnson, Kathrina	Boise, Ida.	Engl. 108	KappaKappaGam.
Johnson, L. H. Clemmer	Los Angeles	PreL. 41	Delta Chi
Johnson, Mildred Lorenz	Pasadena	Ger. 69	2 Lasuen

Johnson, Oscar Fred. Mt. Vernon, Wn. Med. gr. 825 Baker, SF-sf
A. B., Stanford, 1915.
Johnson, Robert Perry Los Angeles Phyl. 27 Delta Kappa Ep.
Johnson, Teresita Trescony Monterey Graph. 19 2 Lasuen
Johnston, Duncan McArthur SanFran. Min. 85 75 Encina
Johnston,Earl T. CottonwoodFalls,Kan. Hist. 73 Phi Kappa Sigma
Johnston, Frank Reed San Jose Phyl. 78 56 Encina
Johnston, Richard Lorimer LosAngeles Law 70 Theta Delta Chi
Johnstone, Harry Cranston Hayward Law 80 168 Encina
Jones, Elton L. Cupertino M. E. 100 44 Encina
Jones, Gertrude Flint Palo Alto Phyl. 11 1061 Bryant-p
Jones, Henry Macy Los Angeles C. E. 44 Theta Delta Chi
Jones, Leslie Bryant Cullen Elko, Nev. Econ. 103 Kappa Sigma
Jones, Lloyd Riverside Econ. 16 The Alexandria-p
Jones, Philip Hanby Alhambra Chem. 57 729 Emerson-p
[1]Jope, Harold Hewitt Roseburg, Ore. Min. 4 345 Hamilton-p
[1]Jordan, Charles William Ouray, Colo. Geol. 81 Phi Delta Theta
Jouvenat, J. Baxter, Jr. Sheridan,Wyo. Econ. 73 Chi Psi
Joyce, Charles Francis Los Angeles C. E. 81 Delta Tau Delta
Judah, Elizabeth M. Los Angeles Chem. 79 Alpha Phi
Jukich, Martin John Sausalito Min. 39 148 Encina
[2]Justement, Louis Henry Palo Alto M. E. gr. 405 Emerson-p
B. S., George Washington University, 1911.
Kaboth, George Ernest Astoria, Oré. M. E. 30 4 Salvatierra
Kahle, Richard Frederick San Diego PreL. 63 22 Lasuen
Kaiser, Charles Lawrence Coalinga M. E. 15 College Terrace
Kalfus, Joseph Leland San Luis Obispo Phyl. 32 751 Ramona
Katten, Simon, Jr. San Francisco Econ. 13 66 Encina
Kawahara, John Yoshio San Francisco Econ. sp. 73 Japanese Club
Kay, Edwin William San Jose Chem. 97 323 N. 5th, SJ-sj
Kay, Willard E., Jr. Ogden, Utah Med. gr. 2624 Calif., SF-sf
A. B., Stanford, 1912.
Kayser, Frederic Visscher Pasadena PreL. 13 Beta Theta Pi
Keen, Sadie Ernestine Palo Alto Ent. 14 931 Scott-p
Kegley, Carl Smith Los Angeles PreL. 75 171 Encina
Kegley, Helen Catherine Los Angeles Graph. 28 25 Roble
Kegley, Hugh Paul Los Angeles Hist. 86 141 Encina
Keith, Charles Angus Candelaria, Nev. C. E. †7 22 Lasuen
Kelker,Geo.David GlenwoodSpgs.,Colo. Med. gr. 2102 Calif., SF-sf
A. B., Stanford, 1915.
Keller, Don Los Angeles Econ. 46 PhiGammaDelta

Kelley, Frank J., Jr.	San Jose	Engl. 12	Kappa Sigma
Kelley, Rose Marie	Redlands	Fr. 45	34 Roble
Kellogg, Chever	Ontario	Chem. 14	178 Encina
Kellogg, Crawford McMann	Ontario	Chem. 116	179 Encina
Kellogg, Lila Pierce	Los Angeles	Ger. 107	50 Roble
Kellogg, William Scripps	Altadena	Engl. 13	Sigma Nu
Kelly, Dorothy Elizabeth	Palo Alto	Fr. 41	745 Cowper-p
[1]Kelly, Edith Clare	Hollister	Lat. gr.	Col. of Pac., SJ-sj
A. B., College of Pacific, 1914.			
Kelly, Elizabeth Marguerite	Berkeley	Span. 27	36 Roble
Kelly, Harold Richard	Titusville, Pa.	Law gr.	Alvarado Hall
A. B., Bucknell, 1915.			
[1]Kennedy, Margaret Lucretia	Modesto	Educ. 123	528 S. 2d, SJ-sj
A. B., Stanford, 1916.			
Kerr, James Charles	Seattle, Wn.	PreL. 31	Cardinal Club
Kerr, Mildred Lenora	Saratoga	Engl. 44	Sigma Kappa
Kerr, Ruby Meta	San Jose	Hist. gr.	312 S. 9th, SJ-sj
A. B., Stanford, 1916.			
Kerwin,Margaret Hope	SaltLakeCity,U.	Law gr.	Kappa Alpha Th.
A. B., College of Pacific, 1914.			
Kester, Edgar Crossman	Everett, Wn.	Law 73	Phi Delta Theta
Ketcham, Donald Edward	Santa Maria	Chem. 66	122 Encina
[1]Kimball, Elena Sophia	Eureka	Educ. gr.	66 Roble
A. B., Stanford, 1915.			
Kimber, Arthur Clifford	Palo Alto	PreL. 47	305 Lytton-p
Kimber, John Evans	Palo Alto	Law 72	305 Lytton-p
Kincaid, George Clark	Manila, P. I.	Law 34	Phi Gamma Delta
King, Frank LeRoy	Long Beach	PreL. 12	Delta Chi
King, Marion Reginald	Porterville	Med. gr.	2102 Calif., SF-sf
A. B., Stanford, 1914.			
King, Melissa	Palo Alto	Ger. 40	435 Homer-p
King, Percy Ensign	Napa	Law 71	Delta Tau Delta
King, Rachel	Portland, Ore.	Math. gr.	Delta Gamma
A. B., Stanford, 1914.			
King, Vernon Leslie	Petaluma	Geol. 116	180 Encina
King, William Henry	Winters	Hist. 13	529 Addison-p
Kinnear, Lloyd Sumner	San Jose	M. E. 79	421 N. 4th, SJ-sj
[1]Kinney, Carleton	Venice	C. E. sp. 3	Kappa Sigma
Kinney, Raymond Harold	Palo Alto	Hist. 37	806 Bryant-p
[1]Kirchner, Ernest Martin	San Pedro	Geol. 6	Mayfield-m
Kirksey, Charles Grady	Palo Alto	Econ. 28	706 Cowper-p
Kirksey, Morris Marshall	Palo Alto	Phyl. 16	706 Cowper-p

Kiser, Fay Wallace	Grants Pass, Ore.	Econ. 109	319 Alma-p
Kistler, Ray Henry	Covina	Med. gr.	2102 Calif., SF-sf
A. B., Stanford, 1915.			
[1]Kistler, Wilbur Denio	Longmont, Colo.	Econ. 9	Sigma Alpha Ep.
Kitagawa, Kay Jiro	Kioto, Japan	Med. gr.	1646Haight,SF-sf
A. B., Stanford, 1914.			
Klechner, Thomas Madison	Mtn.View	Engl. 7	MountainView-mv
Knapp, Florence	Portland, Ore.	Econ. 75	Pi Beta Phi
Kneass, Edward Daniel, Jr.	San Fran.	Engl.sp.31	PhiDeltaTheta
[1]Knight, Courtland Whitney	Pasadena	Econ. 117	PhiGammaDelta
Knight, Goodwin Jess	Los Angeles	PreL. 14	1227 Byron
Knollin, Ernesto Ray	Stanford Un.	Educ. gr.	418 Waverley
A. B., Stanford, 1914.			
[1]Knotts, Coin Elmer	Sacramento	M. E. 5	531 Lytton-p
Knowlton, Gladys Julia	Pasadena	Engl. 75	49 Roble
Knox, Fannie Mapes	Palo Alto	Hist. 36	751 Channing-p
Knox, Nellie D.	Palo Alto	Hist. gr.	751 Channing-p
A. B., Stanford, 1915.			
Knudtson, Robert	Kingsburg	Chem. 15	22 Lasuen
Kocher, George Smout	San Jose	Phyl. 13	176 Bryant-p
Koda, Kichiro	Yamagushi, Japan	Phyl. sp. 71	Japanese Club
Koerner, Andrew	Portland, Ore.	Law 76	Kappa Sigma
Kohl, George Fred	San Jose	Bot. sp. 12	18 Alvarado
Kohlmeier, Carl Luhring	Los Angeles	Econ. 45	Pine Cottage
Kohner, Oscar	Santa Clara	C. E. 91	790Madison,SC-sc
Koll, Milton Lee	Los Angeles	C. E. †5	133 Encina
Krause, Alfred Sampson	Adams, Neb.	Educ. gr.	18 Alvarado
A. B., Nebraska Wesleyan, 1913.			
Krehbiel, Paul Gerhard	Reedley	Hist. 105	78 Encina
Kreps, Nora Elizabeth	Palo Alto	Econ. 104	1129 Emerson-p
Krohn, Robert, Jr.	Portland, Ore.	Econ. 107	Kappa Sigma
Kughen, Glen Omar	Los Angeles	M. E. 80	16 Alvarado
Kuhn, Orta Edward	San Francisco	Med. gr.	2211 Calif., SF-sf
A. B., Baker, 1906.			
Kusama, Yoshio	Nagano Ken, Japan	Med. gr.	403 Kingsley-p
A. B., Stanford, 1916.			
[1]Kuzell, Dudley Francis	Denver, Colo.	Econ. 9	21 Encina
Kwong, Kwok Chan	Canton, China	Bot. 12	415 Lytton-p
Kyle, Marion George	Portland, Ore.	Geol. 44	Beta Theta Pi
Lachmund, Harry Gray	San Francisco	Bot. 101	AlphaTauOmega
[2]Lacy, Walter	Los Angeles	M. E.	Zeta Psi

La Forge, Edward Charles	Palms	C. E. 12	Delta Upsilon
La Grange, Mary Barnes	Hollywood	Econ. †11	23 Madrono
[1]Lakin, Ruth Caroline	Palo Alto	Hist. 24	483 Addison-p
[2]Lall, Shiam	Gwalior, India	Phyl.sp.	WarrenSch.,MP-m
Lamb, Emily Oothout	San Diego	Educ. †11	19 Salvatierra
Lander, John Augustus	Coalinga	M. E. 56	110 Encina
[2]Lane, Gladys Irene	Los Angeles	Chem.	750 Bryant-p
Lang, Neunert	Portland, Ore.	M. E. 48	Pine Cottage
Langdon, Lucy Anita	Los Angeles	Graph. 12	2 Lasuen
[2]Langmade, Eloise T. A. B., Smith, 1909.	East Aurora,N.Y.	Hist. gr.	College Terrace
La Peire, George Warren	Palo Alto	Geol. 113	436 Hamilton-p
Larimer, Robert Emmett	Chariton, Ia.	Econ. 108	Delta Tau Delta
Larsen, Ira Henry	San Francisco	C. E. 35	Kappa Sigma
Laskey, Helen Frances A. B., Stanford, 1915.	Los Angeles	Lat. gr.	10 Roble
Later, Athol Eugene	Rigby, Ida.	Law 9	Mayfield-m
Lau, Sik Kei	Hong Kong, China	M. E. 16	415 Lytton-p
Lawrence, William Beverley	Millbrae	Bot. 36	Milbrae-m
Lawson, Millard Ernest	Ukiah	Geol. †8	Pine Cottage
Leach, Emery Eric	Los Angeles	Educ. 28	25 Alvarado
[2]Leahy, Kathleen Mabel	Upland	Span.	621 Gilman-p
Leard, Frank Jacques	GreatFalls,Mont.	Law 78	Delta Chi
Lee, Ethel	Palo Alto	Hist. 11	970 University-p
Lee, Lola	Palo Alto	Hist. 12	970 University-p
Lee, Russel VanArsdale	Spanish Fk.,U.	Chem. 89	90 Encina
Lee, Stephen Mead	NewLondon,Conn.	M. E. 45	620 Waverley-p
Lee, Wah Seyle A. B., Stanford, 1915.	Canton, China	Geol. gr.	405 Emerson-p
Leh, Clarke Franklin	San Jose	M. E. 73	133 Encina
Leib, Karl Elias	Iron Mountain, Mont.	Law 119	102 Encina
[2]Leicester, John Ferard	San Francisco	Greek	18 Alvarado
LeSuer, Dorothy	Palo Alto	Graph. 42	830 Cowper-p
[2]Leve, Lewis Hayd	Cupertino	PreL.	Alvarado Hall
Levi, Melbourne	Hoquiam, Wn.	PreL. 45	11 Salvatierra
Levy, David Nathan	Prescott, Ariz.	Chem. 14	198 Encina
Levy, Gaston Jack	San Mateo	Chem.116	619Laurel,SM-sm
Levy, Germaine J.	San Mateo	Fr. 62	619Laurel,SM-sm
Levy, Harold Maurice	Reno, Nev.	Engl. 110	30 Encina
Levy, Milton Lester	Denver, Colo.	Phyl. 14	195 Encina
Lewis, Frances Mays	Palo Alto	Graph.105	319Middlefield-p

Lewis, Georgia Belle	Riverside	Graph. †8	26 Madrono
Lewis Howard Wesley	Palo Alto	M. E. 93	1044 Bryant-p
Lewis, John Kent	San Diego	Phyl. 46	22 Lasuen
[1]Lewis, Lily Isabel	St. Paul, Minn.	Fr. †	437 Kipling-p
Lewis, Walter Kinney	Riverside	Law 119	Sigma Alpha Ep.
Licking, Wm. Errol	Battle Mtn., Nev.	Law 54	88 Encina
Likely, Robert Donald	Ukiah	M. E. 83	765 University-p
Lillie, Ralph Dougal	Monterey	Phyl. 87	173 Encina
Lilly, John Kenneth	Ashland, Ore.	PreL. 13	Theta Delta Chi
Lind, Carl Walfred	Kingsburg	M. E. 16	260 Churchill
Linden, Charlotte Smith	San Francisco	Med. gr.	100 Dolores,SF-sf
B. S., California, 1913.			
Ling, Homer John	Oakdale	M. E. gr.	153 Encina
A. B., Stanford, 1915.			
Ling, Ping	Ho-nan, China	Educ. 100	405 Emerson-p
Linn, George Irving	Huntington Beach	Chem. 46	12 Cabrillo
Lissner, Louis Meyer	Pasadena	Econ. 14	107 Encina
Little, Kenneth Keith	Lemon Grove	Phyl. 13	Sigma Nu
Liversidge, Esther Serena	Los Angeles	Graph. 95	Alpha Phi
[2]Lloyd, William Weed	Prescott, Ariz.	Econ.	Alvarado Hall
Locke, John Loor	Seattle, Wn.	PreL. 42	16 Alvarado
Lockwood,RolandMarquam	Portland,Or.	Law 58	125 Encina
Lockwood, William Ellison	Redlands	Econ. 90	6 Encina
Loel, Wayne Frederick	Saratoga	Geol. 97	101 Encina
Loftus, Edna	Whittier	Engl. 77	Chi Omega
Lonabaugh, Alger W.	Sheridan, Wyo.	PreL. 11	Sigma Chi
Long, Charles Stuart, Jr.	Hayward	PreL. 12	Delta Kappa Ep.
Long, Ruth	Hayward	Educ. 82	Gamma Phi Beta
[2]Longmire, William Richard	Highland	Geol. 139	Sigma Nu
Longyear, Robt. D.	Minneapolis, Minn.	Geol. gr.	660 Waverley-p
A. B., Williams, 1914; A. M., Wisconsin, 1915.			
Loomis, Emily Mary	Pasadena	Engl. 14	49 Roble
[2]Loomis, Ivan Aldace	Arroyo Grande	Econ.	Encina
[1]Looney, Jerry Thurman	Palo Alto	Econ. 75	416 Webster-p
Loop, Mabel Frances	Los Angeles	Engl. gr.	Chi Omega
A. B., Stanford, 1915.			
Lorentzen, Kay Gustav	San Francisco	Med. gr.	1356 Post, SF-sf
A. B., Beloit, 1905.			
Lormer, Elizabeth Bernice	Pasadena	Ger. 72	9 Roble
Losh, William Jackson	Mill Valley	Econ. 73	Theta Delta Chi
Loucks, Chas. Ernest	Mountain View	M. E. 70	Mtn. View-mv

Loud, Harold Lester	St. Louis, Mo.	Law gr.		Beta Theta Pi
A. B., Southern California, 1913; A. B., Stanford, 1915.				
Love, Ernest Alexander	Prescott, Ariz.	M. E. 44	200	Encina
Lovotti, Carl Domenic	San Francisco	Phyl. 1	21	Encina
Lowell, Maude	Alhambra	Zool. 68		Gamma Phi Beta
Lowrey, Vivian Frances	Pasadena	Econ. 13	4	Roble
Luhrs, GeorgeHenryN., Jr.	Phoenix, Ariz.	PreL. 55	46	Encina
[2]Lum, Joe Woon	Stanford Univ.	C. E. †	28	Alvarado
Lund, Henry Joseph	San Jose	Zool. 48	526	Spencer, SJ-sj
Lynch, Harry Hudson, Jr.	San Fran.	Engl. 4		Los Gatos-lg
Lynch, Leslie Gordan	Los Angeles	PreL. 40		Kappa Sigma
Lynn, Leo Thomas	Palo Alto	M. E. 7	181	Tasso-p
Lynn, Wright Andrew	Hollister	Law 55	76	Encina
Lyon, Leonard Saxton	Los Angeles	PreL. 49	53	Encina
Lyon, Percy Tufts	Hollywood	Econ. 83		Zeta Psi
Lyon, Ray Blanchard	Des Moines, Ia.	Law †9	660	Waverley-p
Lyon, William Penn	Edenvale	Law 55	100	Encina
Lyons, Frank	Portland, Ore.	PreL. 50	183	Encina
Lytle, Robert Sidney	Los Angeles	Law 75		Kappa Sigma
McCabe, Edward Everett	Palo Alto	Phys. gr.	636	Waverley-p
A. B., Stanford, 1915.				
McCarty, Harold L.	Fellows	M. E. 15	515	Waverley-p
[1]McCarty, JosephineM.	SaltLakeCity, U.	Lat. 39	311	Middlefield-p
McCausland, Harriet Rosa L.	Saratoga	Engl. 74	327	Emerson-p
McClintock, Miller L.	Long Beach	Engl. 51	555	Waverley-p
McCloskey, Downs	Durango, Colo.	Min. 42		Delta Upsilon
McClung, Ryland Eugene	Portland, Ore.	PreL. 45	1021	Cowper
McClurg, VernerBlackmore	LosAngeles	C. E. 122		Phi Delta Theta
McColloch, Frank Cleveland	Baker, Ore.	Law 62		Kappa Sigma
McComb, Marshall Francis	LosAngeles	Law 85		Delta Chi
McCormack, Lincoln, Jr.	Medford, Ore.	C. E. sp. 12	1	Alvarado
McCormick, Charles Leslie	Fowler	Hist. 9	19	Salvatierra
McCracken, VirginiaL.	Livingston, Mont.	Engl. 11	11	Madrono
McCreary, Laura May	Hanford	Engl. 65		Sigma Kappa
[1]McCue, Gladys Ethel	Palo Alto	Math. 120	730	Hamilton-p
A. B., Stanford, 1916.				
[1]McCullough, A. Stafford	Clifton, O.	Geol. gr.	660	Waverley-p
A. B., Stanford, 1911.				
McDermoth, AlansonW.	Aberdeen, Wn.	Chem. 36	729	Emerson-p
McDermott, Elizabeth Lee	Los Altos	Graph. 93		Los Altos-l
McDermott, Louis William	Los Altos	C. E. 53		Theta Delta Chi

Macdonald, Roderick Joseph	Palo Alto	C. E. 7	677 Melville-p
McDonnell, Anne Ethel	Portola	Span. 14	Redwood City-r
MacDougal, Alice	Carmel	Engl. 105	19 Salvatierra
McEuen, Albert Harry	Los Angeles	Geol. 51	Beta Theta Pi
McFarland, David H.	Ontario	Chem.	531 Lytton-p
McGaffey,Herbert Stephen	LosAngeles	C. E. 15	15 Alvarado
McGee, Marguerite Graves	Pasadena	Fr. 109	32 Roble
McGilvray,MalcolmCanmore	StanfordU.	Econ. 50	Sigma Nu
McGlashan, Ximena Myrtle	Truckee	Ent. 101	Madrono
Machado, John Homen	SanLuisObispo	Law 116	130 Encina
McHale, Myra Briggette	Palo Alto	Hist. 107	727 Webster-p
[2]McInerney, John Enright	San Dimas	Econ.	Univ. Hotel
Macintyre, Arthur Donald	LosAngeles	C. E. 11c	147 Encina
McIntyre, Wilmot James	Glendale	Chem. 44	Theta Xi
Mack, Arthur McLure	Oakland	Econ. 27	Phi Kappa Sigma
MacKall, Murray R.	Tacoma, Wn.	Law sp. 67	SigmaAlphaEp.
[2]McKay, Wilbur Martland	Fresno	M. E. 22	Chi Psi
McKee, Donald	San Francisco	C. E. 29	Theta Delta Chi
Mackel, James P.	Los Angeles	Law 78	Delta Chi
McKenna, John Shore	Lemoore	Geol. 105	Mtn. View-mv
McKenna, Mary Susan	Lemoore	Econ. 73	34 Roble
Mackenzie,AndrewNicholls	LosAngeles	Geol. 77	Acacia
Mackie, Donald Wolcott	Bradford,Pa.	M. E. †28	156 Hamilton-p
McKim, Horton Albert	Tonopah, Nev.	M. E. 72	581 Hawthorne-p
[1]McKinney, Verne Willson A. B., Stanford, 1915.	Palo Alto	C. E. gr.	620 Waverley-p
McLachlan, James Douglas	Pasadena	Law 77	Zeta Psi
McMahon, Harry Eugene	PacificGrove	Chem. 107	Campus School
McManus, Joseph A.	Anaconda, Mont.	Chem. 86	The Alexandria
[1]McMurray, William R.	Portland, Ore.	Law 28	Kappa Sigma
[1]McMurtry, Leslie Burge, Jr.	San Fran.	PreL.	Chi Psi
[1]McNary,ClarksonDeweese	Tempe,Ariz.	Min. 7	42 Encina
McNeal, Thomas Carl	Los Angeles	C. E. 75	405 Emerson-p
McNees, Marjorie A.	Whittier	Span. 106	Chi Omega
McNeil, Lindley Norton	Palo Alto	Phyl. †11	735 Cowper-p
MacNeill, Charles Donald	Menlo Park	Phyl. 13	Menlo Park-m
[2]McNulty, Hugh William	Fresno	Geol.sp.30	SigmaAlphaEp.
Macomber,Forrest DeVore	IdaGrove,Ia.	Law 91	Cardinal Club
McPherson, James Douglass	San Jose	M. E. 48	54 Settle, SJ-sj
McPherson, Kenneth Rees A. B., Stanford, 1915.	San Jose	C. E. gr.	54 Settle, SJ-sj

McQuown, Lillian Lucile	Porterville	Fr. 112	Chi Omega
McSherry, Ralph Caylor	Dayton, O.	Engl. 108	55 Encina
Madden, Francis Martin	BayCity,Mich.	Chem. 13	18 Alvarado
[2]Mail, Harriet Alter	Los Angeles	Hist. †	Pi Beta Phi
Maines,HarriettElizabeth A. B., Stanford, 1915.	LosAngeles	Lat. gr.	Alpha Omicron Pi
Maingueneau,EugenieFrances A. B., Stanford, 1916.	SanJose	Fr. gr.	525W.SanCar.,SJ-sj
Malcolm, Vernon Young	Palo Alto	PreL. 34	379 Everett-p
Malm, Walter R.	San Francisco	Geol. 89	2424Steiner,SF-sf
Maltby, Joseph McKinley	Long Beach	Law 110	78 Encina
Manning, Paul De Vries	So. Pasadena	Chem. 123	52 Encina
Mantz, Ruth Walker	Redwood City	Educ. 14	Redwood City-r
Mapes, Gordon Walter	Campbell	PreL. 12	720 Cowper-p
Maple, Grace Marie	Glasford, Ill.	Hist. 26	Pi Beta Phi
Marcus, Anita	San Francisco	Math. 76	Delta Delta Delta
Marshutz, Herbert Stanton	LosAngeles	Engl. 82	3 Encina
Marston, Homer Eugene	San Rafael	Phyl. 43	310 High-p
Marston, Therese Jean	San Rafael	Phyl. 9	Chi Omega
Martin, Edward Richard	Watsonville	PreL. 34	119 Encina
Martin, Mary Frances	Los Angeles	Psych. 10	GammaPhiBeta
[1]Martin, Millard Denny	Gardena	Ent. 7	The Alexandria-p
Martin, Ralph Henry	San Jose	Engl. †9	184 Route 6, SJ-sj
Martin, Walter Given A. B., Ottawa, 1914.	Maxwell, N. M.	Hist. gr.	11 Salvatierra
Marx, Eleanor	Palo Alto	Econ. 13	356 Lincoln-p
Mason, Florence McLaine	Palo Alto	Engl. 44	555 Kellogg-p
[2]Mason, Herbert L.	Fond du Lac, Wis.	Econ.	2956 Pine,Berkeley-b
[2]Mason, Walter E.	Fond du Lac, Wis.	Econ.	2956 Pine,Berkeley-b
[2]Masters, Edward Wilbur	Portland,Ore.	Geol. 30	136 Encina
Mathews, Bruce Reid	Scipio, Utah	Chem. †14	918 Ramona-p
Mathews, Margaret Mary	Eureka	Fr. 94	Pi Beta Phi
Matson, John Jamieson M. E., Cornell, 1915.	Ithaca, N. Y.	M. E. gr.	333 Waverley-p
Mattei, Albert Chester	Los Olivos	Geol. 58	Phi Delta Theta
Maurer, Hazel Leona	Los Angeles	Educ. 79	Chi Omega
Maurer, Rix	Alameda	M. E. 74	Beta Theta Pi
[1]Maxson, Harold Forbes	Los Angeles	Min. †	Kappa Sigma
Mayeda, Isamu	Chiba Ken, Japan	M. E. 113	Japanese Club
Maynard, Elizabeth Stanley	San Jose	Hist. 74	57 Roble
Meese, Gilbert Haven	Meridian	M. E. 7	Mayfield

Melcon, Zenas K. Kingsburg Min. 95 95 Encina
Melom, Carl Marcus Mayfield Fr. gr. College Terrace
B. L., Minnesota, 1901, A. M., 1902.
Mendenhall,GertrudeMary Denver,Colo. Graph. 106 Pi Beta Phi
Mercer, Floyd Los Angeles Econ. gr. 929 Emerson-p
A. B., Christian, 1914, A. M., 1915.
[2]Messick, James Ernest Meridian Econ. 926 Cowper
[1]Merrill, Margaret P. Salt Lake City, U. Engl. 121 Delta Gamma
A. B., Stanford, 1916.
Metz, Dorothy Amanda Sherman, Tex. Econ. 74 15 Salvatierra
Metzler, David Russell Campbell Hist. 11 Campbell-c
Metzler, William Herman Campbell PreL. 15 Campbell-c
Meyer, Charles Hillegass Menlo Park C. E. 103 Menlo Park-m
Meyer, William Robert Redwood City M. E. †31 Alpha Tau Om.
Meyers, Robert Koehler Tulare PreL. 44 121 Encina
Mickle, Aileen Josephine Centerville Span. 43 20 Madrono
Millard, Bryant Tilden San Jose C. E. 52 20 Encina
[1]Miller, Alvin William Portland, Ore. PreL. 15 Kappa Sigma
Miller, Clifton McPherson Santa Cruz Law 126 Delta Tau Delta
Miller, Frank Robert Los Angeles M. E. 74 16 Alvarado
Miller, Herbert Lemuel Long Beach Econ. 52 Kappa Alpha
Miller,HermanPotts,Jr. Harrisburg,Pa. M. E. 91 117 Encina
Miller, James Andrew San Francisco Law gr. Acacia
A. B., Stanford, 1915.
[1]Miller,LelandStanfordW. DesMoines,Ia. Econ. †2 The Greene
Miller, Mabel Alta Dinuba Engl. 90 638 Channing-p
Miller, Waldo Swiers Portland, Ore. Law †12 334 Lincoln-p
[1]Miller, Wayne Leslie Palo Alto Law 74 580 Addison-p
Millett, Emma Priscilla Sunnyvale Bot. †11 Sunnyvale-s
Millett, George Wilber Sunnyvale Med. gr. 2418 Wash.,SF-sf
A. B., Stanford, 1914.
[2]Mills, Sarah Matilda National City Engl. gr. 611 Gilman-p
A. B., Stanford, 1911.
Mills, Zetta Mabel Palo Alto Hist. 105 534 Forest-p
Minssen,HermanFrederick Sterling,Ill. Educ. 111 410 Lytton-p
Missner,FrankRoyStewart SanFrancisco Med. gr. 2102 Calif., SF-sf
A. B., Stanford, 1914.
Mitchell, Emery Ferguson Belvedere PreL. 15 Phi Kappa Psi
Mitchell, Hobart McK. Portland, Ore. PreL. 17 18 Alvarado
Mitchell, Ralph John Tustin M. E. 9 Delta Upsilon
Mitchell, Ruth Webber Ontario Fr. †13 13 Madrono

Mittenthal, Norman Jerome	Fresno	M. E. 116	13	Encina
Miwa, Tsurukichi	Hyogoken, Japan	M. E. sp. 135		JapaneseClub
Monroe, H. Morris	Lebanon, Ohio	Educ. 102	650	Waverley-p
[2]Montalban, Heracho	Iloilo, P. I.	Educ. †	705	Cowper
Montgomery, Dorothy	El Centro	Fr. †12	13	Madrono
[1]Montgomery,EarlHouston	Weaverville	Phyl.	808	Waverley-p
Montgomery, James E.	Morgan Hill	PreL. 13		Sigma Nu
[1]Montgomery, Kenneth C.	Weaverville	PreL.	808	Waverley-p
Montgomery, Marion C. A. B., Stanford, 1915.	Los Angeles	Hist. gr.		DeltaDeltaDelta
Moore, Alice	Los Gatos	Engl. 95		AlphaOmicronPi
Moore, Charles Dunn	Ouray, Colo.	Law 92		The Alexandria-p
Moore, Neil Preston A. B., Stanford, 1914, A. M., 1915.	Palo Alto	Chem. gr.	564	Hamilton-p
Moore, Sidney Fremont	Monrovia	Engl. 79	12	Roble
Moore, William Homer A. B., Stanford, 1915.	Selma	Med.gr.	1410	Octavia,SF-sf
[1]Moorhead,EdwardWernigk	Alhambra	Phyl. 3		Palo Alto Hotel
Morero, Joseph Ernest	San Pedro	Geol. 11	182	Encina
Morgan, Arthur Leon.	CanonCity,Colo.	M. E. 82	166	Encina
Morgan,JosephRichardson	LosAngeles	Engl. 82		Kappa Alpha
Morgan,MadeleineBurleigh	SantaBarb.	Engl. 109	26	Roble
Morgan, Maurice Ed.	Bridgeport,Conn.	Min. 73	34	Encina
Moritani, Tomikichi	Palo Alto	Econ. sp. 22	733	Ramona-p
Mork, Donald James	Mountain View	Math. 9		MountainView-mv
Morosco, Albert Harold	San Diego	Hist. 98		Delta Chi
Morris, Dorothy Blair	Palo Alto	Hist. 36	705	University-p
Morris, John Knox, Jr.	Cloverdale	Phyl. 8	83	Encina
[1]Morrison, Lily	Covelo	Zool. †20		AlphaOmicronPi
[1]Morrow,WilburEmmett	Portland,Ore.	PreL. 25		Sigma Alpha Ep.
Morse, Evelyn	Lodi	Hist. gr.		Madrono
Morse, Genevieve	Lodi	Ger. 107		AlphaOmicronPi
Morton, Oakley Kendall	Oakley	Law gr.		Sigma Alpha Ep.
[1]Mosher, Frank B.	New Richmond,Wis.	Chem. †70	405	Emerson-p
Mosiman, Floyd W.	Aberdeen, S. D.	Engl. 16	347	Ramona-p
Mott, Rodney Loomer	San Jose	Econ. 84	118	Encina
Moul, Charles Thomas	Oakland	Med. †	365	10th, Oak.-o
Moule, Manley Axtell	Cleveland, O.	Econ. 68	148	Encina
Mukaiyama,Masahachi	Hiroshima,Japan	Math. gr.	369	Addison-p
[1]Mukerji, Dhan Gopal	Calcutta, India	Engl. gr.	861	Ramona-p
Mulford, Grace Eudora	Los Angeles	Engl. 16		Sigma Kappa
Mullaly, Edward Francis	Vallejo	Med. gr.	559	Page, SF-sf

Murphy, Frank Edward	Hollister	Phyl. 72	Sigma Chi
Murphy, James Edward	San Francisco	Phyl. †8	22 Lasuen
Murphy, Joseph Aloyious	Chico	PreL. 12	Delta Upsilon
Murray, Emily Southwell	Hanford	Engl. 9	Delta Gamma
Murray, Francis King	Palo Alto	Greek 79	1019 Bryant-p
Murray, Frederic Seymour	Palo Alto	Graph. 105	1019 Bryant-p
Murray, Virginia	San Gabriel	Med. gr.	2737 Clay, SF-sf
Myers, Alvin Wenger	San Francisco	Engl. sp. 13	552 Kellogg
Myers, Lewis Allen	Whittier	Engl. 108	635 Bryant
Nagel, Gunther W.	Palo Alto	Phyl. 81	356 Addison-p
Nagel, Margaret	Los Altos	Graph. 14	10 Cabrillo
Nakada, James Robert	San Francisco	Phyl. 12	433 Melville
Nakamoto,FrankY.	YamaguchiKen,Jap.	Econ. 77	733 Ramona-p
Nam, Ong Yet	San Francisco	Chem. gr.	405 Emerson-p
A. B., Stanford, 1916.			
Narvestad, Olga M.	Spokane, Wn.	Hist. 43	Delta Delta Delta
Needham, Roy Elwood	Tracy	Law 112	Delta Chi
Nehlsen, Herman Fredk.	Davenport,Ia.	M. E. 13	405 Kipling-p
Neill, Ernest Lafayette	Los Angeles	E. E. 120	Acacia
Nelson, Walter Jerome	Spokane, Wn.	Chem. 8	405 Emerson
Nethercut,RuthAllen	LakeGeneva,Wis.	Greek †15	1044 Bryant-p
Neuner, Clarence Martin	Los Angeles	PreL. 29	Delta Upsilon
[1]Newberry, Marion Helen	Los Angeles	Span. 67	Alpha Phi
Newcomer, John Ritchie	Phoenix,Ariz.	PreL. 48	161 Encina
Newhouse, Rolley Wilson	Coachella	PreL. 42	The Alexandria
Newman, Frank Raymond	Colfax, Wn.	Hist. gr.	559 Cowper-p
A. B., Washington State College, 1914.			
Newnan, Eva May	Mountain View	Lat. gr.	MountainView-mv
A. B., Stanford, 1915.			
Nichols, Alan Hammond	Palo Alto	Econ. 12	1345 Webster-p
[1]Nichols, Bernard Charles	El Centro	Law gr.	431 Lytton-p
A. B., Stanford, 1900, J. D., 1916.			
Nichols, Helen Blanche	Palo Alto	Ger. 66	2 Lasuen
Nicholson, Marshall John	Willcox,Ariz.	PreL. 8	4 Salvatierra
Niebel, Herbert Lee	Palo Alto	C. E. gr.	381 Lytton-p
A. B., Stanford, 1914.			
Nielsen, John William	Palo Alto	Med. gr.	1742 Bush, SF-sf
A. B., Washington State College, 1911.			
Niepp, Frederick Antone	Ukiah	E. E. 114	550 Kingsley
Niklason, Clarence Ray.	Audubon, Ia.	Phyl. 67	Cardinal Club

Nisbet, John McHenry	Upland	Geol. 109	Theta Delta Chi
Nishimura, Hatsutaro	San Francisco	M. E. 54	1061 Bryant
[2]Nisson, Estelle Geneva	Santa Ana	Econ. †	65 Roble
Nix, Armin William	Stanford Univ.	Engl. †37	139 Encina
Noack, Thea	Sacramento	Fr. 11	28 Roble
Noble, Harold Albert	Stockton	Ger. 106	Phi Kappa Psi
Noddin, Ralph Ernest B. S., California, 1912.	Los Gatos	Bot. gr.	Los Gatos-lg
Nolan, Frank L.	Palo Alto	Bot. 87	850 Ramona-p
Noonan,Wm.Francis	GlenwoodSpgs.,Col.	Law 109	115 Encina
[1]Nordale, Alfheld H.	Fairbanks,Alaska	Chem.	405 Kipling
Nordale, Arnold M.	Fairbanks,Alaska	M. E. 9	Theta Xi
Nordmann,BernhardFredk.	Sacramento	Law 76	721 Emerson-p
North, Frances A. B., Stanford, 1915.	Cupertino	Engl. gr.	Cupertino-c
Norton, Eleanor	Long Beach	Hist. 70	Gamma Phi Beta
Norton, John Kelley	Palo Alto	Educ. 110	642 Webster-p
Norton, Willis Sherwood	Stockton	M. E. 101	Sigma Alpha Ep.
Norviel, Scott Lamar	Florence, Ariz.	Law 70	515 Waverley
[1]Noyes, Charles Fredk., Jr.	Los Angeles	Econ. 1	Alvarado Hall
Oaks, Ernest Lester	Escondido	M. E. 64	31 Encina
Oberg, Stanford Wilbur	Riverside	C. E. 68	Theta Xi
Oberlé, Eugene Jean A. B., Stanford, 1915.	Palo Alto	Fr. gr.	611 Bryant
O'Brien, Helen Patricia A. B., College of Pacific, 1915.	San Francisco	Engl. gr.	59 Roble
[1]O'Brien, Ruth Hays A. B., Stanford, 1916.	Sunnyvale	Engl. 121	Delta Delta Delta
[1]Obrikat, Victor	Alhambra	Geol. 13	143 Encina
O'Connell, Francis Anthony A. B., Stanford, 1915.	Mtn.View	Law gr.	MountainView-mv
Odenheimer, Marguerite	Los Angeles	Econ. 36	Roble
Ogden, Edith Maples	Bakersfield	Hist. 16	Alpha Phi
Okuma, Genzo	Okinawa, Japan	C. E. 6	Japanese Club
[2]Olinder, Lawrence Gans	San Jose	Hist.	College Terrace
Oliver, Henry McRae	Campbell	M. E. 8	Theta Delta Chi
[1]Oliver, Myron Angelo A. B., Stanford, 1916.	Monterey	Graph. 121	159 Encina
Oliver, Oscar Lee	Merced	Econ. sp. 12	Acacia
Oliver, Robert Watson	Los Angeles	Econ. 44	Delta Upsilon
Olmsted, Margaret Stanley	LosAngeles	Zool. 47	Kappa Alpha Th.

Olmsted, Roger Wolcott	Manteca	C. E. gr.	Manteca-m
A. B., Stanford, 1913.			
Olsen, Harry	Palo Alto	C. E. 136	321 Fulton-p
Olsen, John	Palo Alto	Graph. gr.	321 Fulton-p
A. B., Stanford, 1915.			
Oppenheimer, Ruth	Spokane, Wn.	Chem. 104	DeltaDeltaDelta
Ordway, Frank Aaron	Monterey	PreL. 42	159 Encina
Orme, Charles Henry	Phoenix, Ariz.	Law 107	Delta Upsilon
Ostrander,BeatriceElaine	TwinFalls,Ida.	Econ. 44	48 Roble
Ostrander, Frank Merced	Palo Alto	Law sp.unc.10	271 Univ.,-p
Ostrander, Ray Wellington	Ceres	Econ. 16	375 Everett-p
Otis, Arthur Sinton	Pasadena	Educ. gr.	25 Salvatierra
A. B., Stanford, 1910, A. M., 1915.			
Otterson, Otto Harold	Post Falls, Ida.	M. E. 36	257 University-p
Overacker, Louise	Saint Helena	Econ. gr.	54 Roble
A. B., Stanford, 1915.			
Overacker,RayHoward	HuntingtonBch.	Law 62	425 Ruthven-p
Overman, Helen Doris	Santa Barbara	Bot. 117	56 Roble
[5]Overstrom, Conrad	Pasadena	M. E. †	College Terrace
Overstrom, George	Pasadena	M. E. †9	College Terrace
Owen, Ethel Dale	Los Gatos	Med. gr.	2504 Sacto,SF-sf
A. B., Stanford, 1914.			
Owen, Richard Lewis	Palo Alto	Chem. 59	151 Addison-p
Owen, Wm. McDermott	Los Angeles	PreL. 7	Delta Kappa Ep.
Owens, Winifred Lee	Van Nuys	Engl. †8	Chi Omega
Oyster, Alfred Joseph	Stanford Un.	Econ. 91	Delta Upsilon
[2]Pai, Hu Wei	Amoy, S. China	C. E.	405 Emerson-p
Pann, Edwin Huff	Hawthorne	M. E. 12	446 Hamilton-p
Parker, Frank Harold	Redwood City	M. E. 14	Redwood-r
Parker, Herbert Colvin	SanBernardino	M. E. 80	Sigma Chi
Parker, Nora Helen	San Bernardino	Engl. gr.	KappaAlphaTh.
A. B., Stanford, 1915.			
Parker,Reginald Edward	RedwoodCity	M. E. 13	Redwood-r
[2]Parkinson, Mary	Los Angeles	Hist. gr.	1041 Alameda, SJ
A. B., Stanford, 1915.			
Parsons, Clarence Wilbur	Coalinga	C. E. 64	89 Encina
Parthum, Edward Fredk.	Phoenix,Ariz.	Chem. †13	Theta Xi
Partridge, Jos. Arlington	Nampa, Ida.	Law gr.	111 Encina
A. B., Stanford, 1915.			
Patacsil, Lucas Mallare	Bauang, P. I.	M. E. 13	22 Alvarado
Patterson, Edith Adeline	San Jose	Zool. 12	Sigma Kappa

Patterson, Glenn Gardner	Marengo, Ill.	Econ. 102	1043 Cowper
Patterson, Mary Aubrey	El Centro	Ger. 65	Delta Gamma
[1]Patterson, Wm. Marshall	Atmore, Ala.	Engl. 7	Delta Kappa Ep.
Paul, Forest E.	Pacific Grove	Econ. †45	Phi Kappa Sig.
Paul, William Glae	Wickenburg, Ariz.	Law 101	Delta Tau Delta
Paulsen, Abby Belle	Palo Alto	Engl. 43	602 Waverley-p
Paulsen, Jasper William, Jr.	Palo Alto	Geol. 68	602 Waverley-p
Paulson, John Edwin A. B., Stanford, 1914.	San Francisco	Med. gr.	2102 Cal.,SF-sf
Pauly, Irene Margaret	Hebron, Colo.	Math. 60	2 Lasuen
Payne, Alan Edward	Morgan Hill	Educ. sp. 103	77 Encina
Pearce, Reba	Palo Alto	Hist. 8	1024 Emerson-p
Pearsall, Helena	Tacoma, Wn.	Educ. 41	830 Cowper-p
[1]Pearson, Oscar Wallace	Troy, Ohio	Econ. †6	359 Emerson-p
Peck, Emily Gilman	Hollywood	Hist. 78	48 Roble
Peck, Maybelle Claire	Compton	Graph. 80	Alpha Phi
Peckham, Phyllis A. M.	Los Angeles	Engl. 75	72 Roble
Pedley, Eric Leader	Riverside	C. E. 14	Chi Psi
Pedley, Lionel Everard	Riverside	C. E. †38	Chi Psi
Peers, George Alexander	Mayfield	M. E. 104	184 Encina
Pehl, Arthur Hales	Upland	PreL. 45	140 Encina
Pehl, Earl W. C.	Upland	M. E. 16	22 Encina
Pehrson, Elmer Walter	San Jose	Geol. 43	240 Walnut, SJ-sj
Peirce, Millard O.	Wilmington, Del.	Hist. 99	555 Waverley-p
Pelouze, Robert Forsyth	EaglePt.,Ore.	Econ. 9	Sigma Nu
Pelton, Benj. Witwer	New York, N. Y.	Engl. 74	Phi Gamma Delta
[2]Pemberton, Guilford	Beatrice, Neb.	Hist. †	The Alexandria-p
Penniman, Arthur Webb	San Mateo	M. E. 9	Burlingmae-b
Pennington, Thomas Edmund	Belmont	M. E. 8	Belmont-b
Perham, George Sheldon	San Mateo	Econ. 43	Sigma Chi
Perham, Philip Doss-Bradley A. B., Stanford, 1915.	Palo Alto	Engl. gr.	335 Melville-p
Perry, Altha A. B., Stanford, 1915.	Kingman, Ariz.	Law gr.	Chi Omega
[2]Peters, Raymond Ashley	SanFrancisco	Educ. sp. 68	262 Kingsley-p
[1]Petersen, Fred N.	Fairmont, Minn.	Econ.	Phi Kappa Psi
Petersen, Henry Edward	Richfield, U.	Chem. 11	18 Alvarado
Petersen, Walter Edward	SantaBarbara	M. E. 127	627 Homer-p
Peterson,HelenMyranda	Honolulu,T.H.	Engl. 77	446 Forest-p
Peterson, Ivan Leopold	Burlingame	Chem. 11	Burlingame-b
Peterson, Noble Goodwin	Scipio, U.	Hist. 114	Mayfield

Petree, Neil H. San Jose Econ. 16 Delta Tau Delta
Petterson, Ivar Stanly Kingsburg M. E. †5 21 Encina
Pettingill Henry S., Jr. Los Angeles C. E. 64 Beta Theta Pi
Pettit, Albert Victor Hoquiam, Wn. Med. gr. 2418 Wash., SF-sf
A. B., Stanford, 1915.
Phares, John French Santa Rosa Bot. 101 Kappa Alpha
Phelps, Edward Joseph, Jr. Boise, Ida. Engl. 6 Cardinal Club
Pheney, Wm. DeJarld Durango, Colo. Phyl. 8 18 Alvarado
Philip, Charles Whipple San Francisco Phyl. 20 PhiKappaSigma
Philips, Serena Palo Alto Bot. gr. 612 Waverley-p
A. B., Stanford, 1916.
Phillips, Alfred Liles Santa Cruz Med. gr. 2009 Pacific,SF-sf
A. B., Stanford, 1913.
Phillips, Jonathan Edward Modesto Law 102 Delta Chi
Phillips, Wendell Keigh Portland, Ore. Law 100 Kappa Alpha
Piatt, Richard Henry Palo Alto Hist. gr. 847 Bryant-p
A. B., Stanford, 1915.
Pier, Arthur Bruno Los Angeles M. E. 80 174 Encina
[1]Pierce, Juliet Rich Los Angeles Ger. gr. 319 Middlefield-p
A. B., Southern California, 1915; A. B., Stanford, 1916.
Pilcher, Velona Bissell Long Beach Engl. †13 53 Roble
[1]Pilipenko, Vasili I. Ekaterinoslave,Rus. C. E. sp. 70 271 Addison-p
[2]Pinney, Ralph Bailey Crawford, Neb. M. E. 1 Alvarado
Pinney, Tucker Lee Phoenix, Ariz. Econ. 43 121 Encina
Piper, Will Bruce Prescott, Ariz. C. E. 139 97 Encina
[2]Plummer, Dorothy Marie Centerville Engl. † Roble
Poindexter, Emily Virginia Los Gatos Greek gr. AlphaOmicronPi
A. B., Stanford, 1915.
Popp, William Louis San Jose C. E. 55 63 Lenzen,SJ-sj
[2]Porter, Anne Franklin, Neb. Lat. gr. San Mateo-sm
A. B., Nebraska, 1900, A. M., 1906.
Porter, Gertrude Elizabeth Boise, Ida. Engl. 12 Delta Delta Delta
Post, Mary Bolton Palo Alto Engl. 67 364 Kingsley-p
[1]Potts,Wm.Andrew Mt.Gambier,S.Aust. E. E. gr. 17 Salvatierra
B. E., Adelaide, 1913; Engineer, Stanford, 1916.
Pratt, Arthur McLure Mayfield Phyl. 5 College Terrace
Pratt, Eric Torrens Ontario Econ. 103 186 Encina
Pratt, Eugene Elliot Ogden, Utah Law 129 170 Encina
Preston, Flora May Palo Alto Hist. 82 39 Roble
Price, Melvin Buffalo, N. Y. PreL. 13 Delta Kappa Ep.
Price, Merton James San Francisco Med.gr. 1015Devis'ro,SF-sf
A. B., Stanford, 1913.

Price, Verona Violet	Palo Alto	Econ. 40	602 Webster-p
[2]Prien, Otto Louis	Morgan Hill	Med. gr.	251 Emerson-p
B. S., Wyoming, 1908.			
Prior, Frank Oscar	Escondido	M. E. 38	128 Encina
Pritchard, Walter Ferris	Colton	Phyl. 86	9 Encina
Proctor, Wm. Martin	ForestGrove,Or.	Educ. gr.	Los Altos-l
A. B., Whitman, 1901, A. M., 1906.			
Prout, Clara Lucille	Salt Lake City, U.	Engl. 105	56 Roble
Pruett, Alvin William	Fresno	Ent. 72	Kappa Alpha
Pruett, Harry Jeroam	Fresno	Med. gr.	2418 Wash.,SF-sf
A. B., Stanford, 1912.			
Purdy,Donald Fredk.	Dawson,Y.T.,Can.	M. E. 43	53 Encina
Putnam, Dorothy	Gifford, Wn.	Hist. 109	KappaKappaGam.
Pyles, Ethel Goldie	Whittier	Ger. 40	5 Cabrillo
Quinby, James Abram	San Jose	PreL. 56	4 Encina
Rainey, Garnet Cecil	Los Angeles	Econ. 73	40 Encina
[1]Rainville, Felix Louis	Willow	Bot. 53	627 Waverley-p
Rakestraw, Norris Watson	LosAngeles	Chem. 104	51 Encina
Ramsey, Bessie Louise	Billings, Mont.	Econ. 44	32 Roble
Rand,Gerald Stevenson	Vancouver,B.C.	Econ. 13	Alvarado Hall
Randau, Carl Albert	Los Angeles	Econ. 13	181 Encina
Randau, Clemens J.	Los Angeles	Econ. 47	49 Encina
Rathbun, Dwight S.	Santa Monica	Econ. 22	Sigma Nu
Rathbun, Harry John	San Jose	M. E. 123	44 Encina
Rausch, Flora Marie	Oak Bluffs, Mass.	Greek gr.	Women'sClubHs.
A. B., Stanford, 1914.			
[1]Ray, James Chandler	Palo Alto	Geol. gr.	1235 Webster-p
A. B., Stanford, 1914, A. M., 1915.			
[1]Rayburn, Irma Lois	San Jose	Educ. 96	Sigma Kappa
Rea, Bernard Johnson	San Bernardino	Phyl.-Med. 136	410Lytton-p
Rea, James Harrold	Gilroy	C. E. 143	Chi Psi
Reagan, William Nilson	Long Beach	PreL. 10	Chi Psi
Reardon, Fred. Jas.	Guanajuata,Mexico	Geol. sp. 7	Theta Xi
Redwine, Clyde Columbus	Mtn. View	Econ. 40	Mtn. View-mv
[1]Reeves, Frank Wixom	San Bernardino	Geol. 135	Sigma Nu
A. B., Stanford, 1916.			
Rehm, Francis Edward	Sonora	Geol. 125	153 Encina
Rehm, Leonard Joseph	Sonora	Econ. 14	190 Encina
Rehmke, Anna Marie	Palo Alto	Ger. gr.	667 Melville-p
A. B., Stanford, 1915.			
Rehmke, Henrietta	Palo Alto	Ger. gr.	667 Melville-p
A. B., Stanford, 1915.			

[1]Reid, Dornford Allan	Aberdeen, Wn.	M. E. 4	Theta Xi
Reillac, Emile	Oakland	PreL. 8	18 Alvarado
Reilly, Hubert Bernard	Portland, Ore.	Chem. 45	43 Encina
Reinke, Benj. Clarence	San Francisco	Chem. 15	620 Waverley-p
Remington, Robert Hiram	Palo Alto	C. E. 48	471 Channing-p
Renkel,RogerHenryWm.	St.Louis,Mo.	Chem. 48	80 Encina
Rensch, Hero Excelsior A. B., Pomona, 1915.	Pasadena	Ger. gr.	721 Waverley-p
Rethwilm, Lorruli Anna A. B., Missouri, 1913.	St. Louis, Mo.	Med. gr.	2321 Calif.,SF-sf
Reyburn, Ellna	Mountain View	Hist. 9	Mountain View-mv
Reynolds, Clark Charles	Pasadena	PreL. 16	Beta Theta Pi
Reynolds, Coralie M.	Saratoga	Graph. †16	801 Waverley-p
Reynolds, Jere Thomas	Los Angeles	PreL. 50	Kappa Alpha
Reynolds, John Lynn A. B., Stanford, 1912.	Los Angeles	M. E. gr.	630 Lincoln
[1]Reynolds, Lloyd Robinson A. B., Stanford, 1915.	Upper Lake	Med. gr.	68 Encina
Rich, Willis Horton A. B., Stanford, 1909.	Lancaster	Zool. gr.	Stanford Univ.
Richards, Alva Mary A. B., Stanford, 1915.	San Jose	Educ. gr.	22 Roble
[1]Richardson, James Kempe A. B., Stanford, 1916.	Fresno	C. E. 120	Delta Kappa Ep.
Richardson,WilloughbyP.	Portland,Ore.	Phyl. †7	16 Alvarado
Richey, Frank Herbert A. B., Stanford, 1913.	Merced	Law gr.	Beta Theta Pi
Richter, Margaret Rose	Los Angeles	Engl. 98	15 Madrono
Richter, Milton Victor	San Mateo	Bot. 10	718 4th, SM-sm
Riddell, Robert James A. B., Monmouth, 1915.	Sparland, Ill.	Law gr.	552 Hamilton-p
Ridder, Harold Ferdinand	Long Beach	M. E. 73	16 Alvarado
[1]Riebel, Chester Archie	Roseburg, Ore.	PreL. 48	College Terrace
Rifenberick, Wm. Lorenzo	Palo Alto	M. E. 92	Box 115-p
Righter, Cornelius Erwin	Campbell	Hist. 10	5 Encina
Righter, Floyd Lester	So. Pasadena	Chem. †46	12 Encina
Riley, Thelma Marie	Colton	Hist. 45	2 Lasuen
Ring, Sidney Harrison	Portland, Ore.	Econ. 108	39 Encina
Robbins, Albert C., Jr.	Los Angeles	Econ. 6	Delta Upsilon
Robbins, Donald Thorley	Los Angeles	M. E. 11	AlphaTauOmega
Robbins, Wesley Eugene	Portland,Ore.	Engl.40	103WhiteRd.,SJ-sj

[1]Roberts, Gordon Arthur	San Mateo	C. E.		Sigma Nu
Roberts, Perry Buchanan, Jr.	PaloAlto	M. E. 14		Phi Kappa Psi
Roberts, Ralph Smith	Keosauqua, Ia.	Educ. 96		131 Encina
Roberts, Richard Evan	Redlands	Law gr.		Phi Delta Theta
A. B., Stanford, 1914.				
Roberts, Weymouth M.	Redlands	PreL. sp. 37		Phi Kappa Psi
Robinson, Bernard B.	Butte, Mont.	PreL. †16		11 Salvatierra
Robinson, Geroid	Phoenix, Ariz.	Hist. 55		154 Encina
Robinson, Hester Douglas	Trabuco	Engl. 41		31 Roble
Rockwood, Paul Clark	Monrovia	Graph. 16		604 Gilman
[1]Roehrig, Frederick Austin	Pasadena	M. E. †5		Phi Gamma Delta
Rogers, Bogart	Los Angeles	PreL. 13		Kappa Sigma
Rogers, Frederick Rand	San Jose	Phyl. 23		550 S. 6th, SJ-sj
Rogers, Harold P.	Forest Grove, Ore.	C. E. 38		Boat House
[2]Rogers, Hattie Ethelyn	San Jose	Engl. gr.		117 Lenzen, SJ-sj
A. B., College of Pacific, 1909.				
Rogers, Leslie Charles	Ventura	Law 73		Phi Kappa Sigma
Rohrback, Daniel William	Watsonville	M. E. 104		58 Encina
Roney, Guy Joseph	Placentia	Hist. †5		11 Salvatierra
Roome, Mildred Florence	Los Angeles	Span. †		Alpha Phi
de Ropp, Alfred, Jr.	New York, N. Y.	Chem. 106		22 Lasuen
Rose, Franklin O.	Winnipeg,Man.,Can.	C. E. sp. 74		11 Salvatierra
Rosenthal, Ethelyn May	San Francisco	Engl. 40		6 Roble
Ross, Donald Malcolm	Modesto	M. E. 11		92 Encina
Ross, George Paul	Lakeview, Ore.	Law gr.		659 Melville-p
A. B., Stanford, 1915.				
Ross, John Stanley	Palo Alto	Geol. 85		561 Middlefield-p
Rossiter, Grace	Portland, Ore.	Ger. †14		KappaAlphaTheta
Roth, Earl Frederick	Willits	Med. gr.		105 Encina
A. B., Stanford, 1916.				
Rouiller, Marcelle Henriette	Palo Alto	Fr. gr.		431 Channing-p
A. B., Stanford, 1915.				
Rouse, Marshall Keene	Mankato,Minn.	Chem. 13		333 Kipling-p
Roush, Lucile Bertha	Stanford Un.	Bot. 46		Cedro Cottage
Royden, George Taylor	San Mateo	M. E. 81		San Mateo-sm
[1]Royden,HerbertNathan,Jr.	San Mateo	M. E. 35		High & Hawth.-p
Rugg, Ethel Dickinson	Oakland	Fr. 43		Chi Omega
[1]Russ, Glenn Allen	Carlotta	Engl.		605 Gilman-p
Russell, Elizabeth	Glendale	Math. 87		14 Roble
Russell, John Henry	Los Angeles	Law 79		Phi Delta Theta
Russell, William Otis	Los Angeles	PreL. 41		Kappa Sigma

Ryan, Frederick Charles	Palo Alto	C. E. sp. 40	219 Addison-p
Ryan, Sidney Eastwood	San Jose	Engl. sp. 8	DeltaTauDelta
[1]Ryon, Harrison John	Charles City, Ia.	Law gr.	Sigma Chi
A. B., Stanford, 1915.			
Sakuma, Henry Fumiya	San Jose	M. E. 130	Japanese Club
Salomon, Edward	San Francisco	Med. gr.	1634 Fell, SF-sf
B. S., California, 1913.			
[1]Salterbach, Clayton Philip	Monterey	PreL. 13	College Terrace
Sample, Fillmore Collins	Fresno	Phyl. 44	Sigma Alpha Ep.
Sanborn, Frederick William	Redlands	PreL. 15	18 Encina
Sanborn, Lewis Hampton	Palo Alto	Phyl. 12	454 Homer-p
Sanborn, Maury Holland	Pasadena	Phyl. 41	Zeta Psi
Sanborn, Morgan Allan	Palo Alto	Law 129	454 Homer-p
Sanden, Eugene Stuart	Helena, Mont.	PreL. 48	4 Salvatierra
[2]Sandstrom, Arthur Chas.	RedwoodCity	C. E. gr.	Redwood-r
A. B., Stanford, 1914.			
Sanford, Laura Maud	San Francisco	Fr. 62	Delta Delta Delta
Sappington, Clarence Olds	Modesto	Med.gr.	2209Union,Berk.-b
A. B., Whitman, 1911.			
Saunders, Stewart Acers	Emmetsb'g, Ia.	PreL. 26	Delta Kappa Ep.
Saunders, Wm. Ewart	Emmetsburg, Ia.	Econ. 101	Delta Kappa Ep.
Sawtelle, James Mhoon	Tucson, Ariz.	PreL. 45	Kappa Sigma
Sawyer, Carlotta	Mountain View	Bact. 83	MountainView-mv
Sawyer, Dwight Lewis	Gardena	Geol. 55	Theta Xi
Say, Harry Leslie	Parlier	PreL. 41	95 Encina
Sayre, Crystal	Tulare	Math. 72	Chi Omega
Sayre, Harold H.	Calgary, Can.	PreL. 8	Alpha Tau Omega
[1]Schaeffer, Negley	Germantown, Ohio	Phyl. 57	101 Circle-p
Schaufelberger, Wm. M.	Hastings,Nebr.	Chem. 49	129 Encina
Schaupp, Karl Ludwig	San Francisco	Med. gr.	3300 Clay, SF-sf
A. B., Stanford, 1913.			
Schein, Sidney	San Jose	Chem. 48	37 E. Julian, SJ-sj
Schellbach, Genevieve	San Jose	Engl. gr.	Sigma Kappa
A. B., Stanford, 1915.			
Schellbach, Mabel Louise	San Jose	Ger. 106	Sigma Kappa
Schempp,ChristyAdolph	Taunton,Mass.	Chem. 108	225 Addison-p
Schilling, Marjorie Lucille	San Jose	Law 78	Madrono
Schlesinger, Lee	San Francisco	Econ. 30	Sigma Nu
[1]Schluer, Schurley Emil	Woodland	PreL. 6	Kappa Sigma
Schnell, Eugene Andrew	Mayfield	Graph.93	341Columbia,M-m
Schnetzler,StanleyStolz	B'verDam,Wis.	PreL. 77	314 Ramona Bldg.

Scholz, Carl Eugene	Campbell	M. E. 77	130 Encina
[1]Schultz, Lloyd George	San Francisco	Econ. 1	Sigma Alpha Ep.
Schulz, Nellie Gertrude	Porterville	Econ. 11	35 Roble
Schulze, Laclair Davidson A. B., California, 1915.	Oceanside	Law gr.	18 Alvarado
[1]Schumann, Harry F.	San Jose	M. E. 30	Acacia
Schwarzenbek, Francis Xavier	San F.	Min. 46	120 Encina
Scott, Caleb Emlen	San Mateo	Bot. 73	San Mateo-sm
Scott, Clyde H.	Santa Barbara	C. E. 73	136 Encina
Scott, Ewing Carruth	Iola, Kan.	Chem. 103	169 Encina
[2]Scott, Hamlet Woodburn	Oakland	PreL.	Cardinal Club
Scott, Walter Winthrop	Willits	Geol. 103	105 Encina
Scovel, George Kenneth	Chadron, Neb.	Law 106	79 Encina
Scudder, Kathreen V.	Glendale,Ariz.	Greek 51	918 Cowper-p
Seabrook, Dean Baynard	Portland, Ore.	Phyl. 14	415 Lytton-p
[1]Sears, Edward Albert, Jr.	San Diego	PreL. 21	Phi Delta Theta
Sellards, John A. A. B., Illinois, 1912.	Champaign, Ill.	Fr. gr.	25 Salvatierra
Senneff, Gertrude Winifred	LosAngeles	Rom. Lang. 12	87 Roble
Sessions, Herbert Fiske	Portland, Ore.	Geol. 11	17 Salvatierra
[2]Sevier, Donald Bullock	Eureka	M. E.	25 Salvatierra
Sevier, Raymond Arthur	ArroyoGrande	Chem. 42	142 Encina
[2]Seymour, Donald Irving A. B., Stanford, 1915.	Palo Alto	C. E. gr.	828 Cowper-p
Seymour, Doris Margaret	Palo Alto	Engl. 46	828 Cowper-p
Shamberger, John Philip	Payette, Ida.	Econ. 10	The Alexandria-p
Sharp, Edward William	Chico	C. E. 115	81 Encina
Sharp, Leslie Harrison A. B., Lake Forest, 1912; A. M., Stanford, 1915.	Albany, Ore.	Chem. gr.	4 Salvatierra
Sharp, Sidney Joseph W. A. B., Stanford, 1914.	Hanford	Law gr.	6 Stanford Union
Sharpe, Otis Allen B. S., California, 1912.	San Francisco	Med. gr.	2129 Calif.,SF-sf
Sheedy, Frank Ainsworth	Los Angeles	Phyl. 12	Zeta Psi
Sheehan, John Edward A. B., Colorado College, 1913.	Montrose, Colo.	M. E. gr.	Encina
Sheldon, Katherine Anna	Palo Alto	Engl. 77	851 University-p
Sheldon, Virgil Lee Allen	Berkeley	Law 60	Chi Psi
Shelton, Bob Grandfield	Los Angeles	Hist. 45	Pi Beta Phi
Shelton, Leigh Claiborne	Los Angeles	Hist. 74	Pi Beta Phi
Shepard, Joseph A.	Salt Lake City, U.	M. E. 108	194 Encina

[1]Shepardson,DwightEmerson	Fullerton	Phyl. 85	9 Encina
Shepherd, Harold	Paris, Ida.	PreL. 12	718 Bryant-p
Sherwin, Emery Downing	San Diego	C. E. 77	Kappa Alpha
Shields,GeorgeCalhoun	Mt.Vernon,Wn.	PreL. 9	415 Lytton-p
Shimodao, Saichi	Hilo, Hawaii	C. E. 113	Japanese Club
[1]Shippert, John Philip B. S., Knox, 1904.	Fort Jones	Med. gr.	533 Bryant-p
Shipway, Leslie Scott	San Jose	Econ. 80	67 S. 20th, SJ-sj
Show, Joseph Henry	Palo Alto	M. E. 8	353 Melville-p
Shriver, Harold Dexter	Eureka, Utah	E. E. 120	Theta Xi
Shriver, Melvin Harper	Eureka, Utah	Econ. 9	Theta Xi
Sias, Donald	Corona	Econ. 11	Phi Kappa Sigma
[1]Sickler, Jack Miller	Pasadena	Geol. 120	Zeta Psi
Siefert, Herman George	Pasadena	Chem.120	AlphaTauOmega
Siemon, Frederick	Ontario	Min. 139	179 Encina
Sierk, Herbert	St. Louis, Mo.	Ger. 103	633 Lytton
[2]Simmons, Glenn Dewitt	Medford, Ore.	Econ.	Alvarado Hall
Simon, Dorothy Janet	Butte, Mont.	Hist. 107	Sigma Kappa
Simonds, Sarah Louise	Los Angeles	Phyl.-Med. 120	Delta Gam.
[1]Simonson, Stanley Stoddard A. B., Stanford, 1915.	Merced	Econ. gr.	Delta Upsilon
Simpson, Beverly	San Francisco	Phyl. 13	196 Encina
Simpson, Carolyn Elen	Palo Alto	Engl. 71	Chi Omega
Simpson, Helen McDougall	San Jose	Graph. 47	Madrono
Single, Carroll John	Stockton	Law 83	Zeta Psi
Sisson, Wm. Frederick	Flagstaff, Ariz.	Econ. 105	Sigma Chi
Skelton, Leland Rice	Okmulgee, Okla.	Phys. 75	712 Waverley-p
Skinner, Harvey Herbert	Easton	Bot. 51	Easton-e
[2]Slade, Franklin M.	San Francisco	Hist. 15	Beta Theta Pi
Slater, Herbert Nichols	Palo Alto	Ger. †9	532 Homer-p
[1]Slocum, LeCount Haynes	Palo Alto	Geol. 34	803 Cowper-p
Small, Otis Danforth	Cupertino	Chem. sp. 32	Cupertino-c
Smalley, William Denney	Pasadena	PreL. †11	PhiGammaDelta
Smallwood, Walter Charles B. S., California, 1913.	Richmond	Med. gr.	2887 Bush, SF-sf
[1]Smead, Armour Langdon	Los Angeles	PreL. sp. 5	HotelLarne-SF
Smith, Andrew Mackay	Hollywood	M. E. 73	Kappa Sigma
Smith, David MacKusick	Long Beach	PreL. 16	Delta Chi
Smith, Earl Martin	Richfield	Econ. 46	545 Bryant-p
Smith, Edith Howard	Easton	Fr. 103	Delta Gamma
Smith, Emily Violet	Los Altos	Chem.10	RFD 18,MtnVw-m

[1]Smith, Franklyn Vincent	Portland, Or.	Econ. †2	Chi Psi
Smith, Gwendoline	Portland, Or.	Psych. 80	Alpha Phi
Smith, Harrison Painter	Los Angeles	Chem. 11	Alvarado Hall
Smith, Hart G.	Marshalltown, Ia.	Span. 5	Menlo Park
Smith, Jessie Edna	Redwood City	Fr. 111	Redwood City-r
Smith, Lulu Belle	Guthrie Center, Ia.	Engl. gr.	352 Fulton-p
A. B., Parsons College, 1906.			
Smith, Mary Morgan	Los Gatos	Lat. gr.	Los Gatos-lg
A. B., Vassar, 1910; A. M., Stanford, 1915.			
Smith, Melancthon, Jr.	Los Angeles	Econ. 14	Phi Kappa Sigma
[2]Smith, Perry Linton	San Jose	Chem. sp.	271 N. 5th, SJ-sj
Smith, Roderick Arbuckle	Olympia, Wn.	PreL. 42	537 Hamilton-p
Smith, Ruth Alice	Chico	Educ. 9	Sigma Kappa
Smitherum, Edgar	San Jose	C. E. 91	177 Encina
Snell, Frederic Charles	Los Angeles	C. E. sp. 3	The Armory
Snyder, Howard Ogier	Oakland	M. E. 39	16 Alvarado
[1]Soper, Harold Calhoun	Palo Alto	Geol. 74	Phi Kappa Psi
Spalding, Helen Godfrey	Los Angeles	Engl. 87	55 Roble
Speers, Roland Root	Santa Monica	Phyl. 32	Sigma Nu
Spence, Ruth	Salt Lake City, Utah	Engl. 102	Delta Gamma
Spencer, Lawrence Milton	San Fran.	Geol. 58	Phi Kappa Psi
[2]Spencer, Louis Bernard	Hawthorne, Nev.	Geol. gr.	Stanford Union
A. B., Stanford, 1898.			
Spengemann, William E.	Santa Clara	M. E. 16	887 Franklin, SC-sc
[2]Spicer, William Harper	Mountain View	Span. sp.	Mtn. View-mv
Sprague, Leonard Tower	Grafton, N.D.	Econ. †15	Theta Delta Chi
[1]Springsteen, Benjamin Franklin	Napa	Engl. sp. 4	Phi Kappa Psi
Squire, Ruth Hortense	Palo Alto	Engl. 47	900 University-p
Stafford, Walter Joseph	San Francisco	PreL. 47	Zeta Psi
Stammer, Walter Henry	San Jose	Law gr.	Delta Chi
A. B., Stanford, 1914.			
Staniford, Warren Paul	Fresno	Law 102	Sigma Chi
Stanley, Herbert Mark	Palo Alto	Geol. 76	269 Hawthorne-p
Stark, Anna Vaal	Palo Alto	Graph. 82	1020 Ramona-p
Stark, Marguerite Dare	Palo Alto	Engl. 78	1020 Ramona-p
Starkey, Harold B.	San Diego	PreL. 14	Alvarado Hall
[1]Starnes, William Laurance	Exeter	M. E. 53	90 Encina
Steadman, Alva Edgar	Beresford, S. D.	Hist. 114	182 Encina
Stearn, Allen Edwin	St. Louis, Mo.	Chem. gr.	80 Encina
A. B., Stanford, 1915.			
Stearn, Joseph Harold	Los Angeles	C. E. 33	AlphaTauOmega

Stearn, Noel Hudson	St. Louis, Mo.	Engl. 62	1102Linc.,Mayfield
Stearns, Leland Church	Oakland	M. E. 78	Sigma Chi
Stebbins, Barton Abbey	Los Angeles	PreL. 13	Beta Theta Pi
Steele, Arthur Edward	San Francisco	Law sp. 38	Kappa Alpha
Steinbeck, Karl G.	Hollister	C. E. 43	24 Encina
Steinberger, Grace H.	Redwood City	Ger. 73	Sigma Kappa
[1]Steinhart,Theo.Martin	Logansport,Ind.	Chem. †6	Kappa Sigma
Steininger, Alma Helen	Palo Alto	Graph. 74	Alpha Phi
Steininger, Nadine M.	Los Angeles	Hist. 94	419 Webster-p
[2]Steiny, Homer J.	Stockton	Geol. 74	Zeta Psi
Steiwer, William Hoover	Portland, Or.	Span. 9	Zeta Psi
Stellar, Arnold Thurlow	Eagle Rock	Law 38	Delta Chi
Stendel, Dorothy Esther A. B., Stanford, 1914.	Los Angeles	Ger. gr.	63 Roble
[1]Stephens, James Fred	Berkeley	Min. 6	Theta Delta Chi
‡'Stephenson, Hugh Chester	Alpine	M. E. 82	704 Bryant-p
Stevens, Blaine L.	Palo Alto	Ent. 65	926 Cowper-p
Stevens, John Egbert B. S., Occidental, 1913.	Afton	Med. gr.	2105 Pine, SF-sf
Stevens, Lloyd C. A. B., Stanford, 1915.	Graceville, Minn.	Law gr.	Phi Delta Theta
Stevens, Russell Brennan	Healdsburg	Econ. 10	16 Alvarado
Stevenson, Robert Clifford	Boise, Ida.	C. E. 14	College Terrace
Stevick, Mary Ellen	San Francisco	Econ. 87	KappaKappaGam.
Stevick, Nana	San Francisco	Engl. 57	KappaKappaGam.
Stewart, Clarence Edward	Stockton	C. E. 117	Chi Psi
Stewart, Florence Dean	Los Angeles	Hist. 107	KappaAlphaTh.
Stewart, Geneva Grace	Stockton	Hist. 74	Gamma Phi Beta
Stewart, Gwendolyn A. B., Stanford, 1900.	Santa Barbara	Med. gr.	12 Madrono
Stewart, Harold Smith	Upland	Geol. 106	192 Encina
Stewart, Hugh	Escondido	M. E. 21	128 Encina
Stewart, John Thomas	Live Oak	Law unc. 56	145 Encina
Stewart, Leo William	Bernice, Mont.	Law 59	The Alexandria-p
Stillson, Grace Elizabeth A. B., Stanford, 1915.	Palo Alto	Hist. gr.	451 Ruthven-p
Stinchfield, Roxana J. A. B., Stanford, 1915.	College City	Bot. gr.	327 Emerson-p
Stiver, Howard Xavier	Leetonia, Ohio	Phil. 39	Chi Psi
[2]Stocklmeier, Adele Irmler	Cupertino	Graph. 58	Cupertino-c

‡Deceased, January 7, 1916.

Stocklmeier, Alfonso J.	Cupertino	C. E. 13	Cupertino-c
Stocklmeier, Louis	Cupertino	C. E. 114	Cupertino-c
Stoddard, Jeanne	Merced	Math.†14	AlphaOmicronPi
Stone, Elizabeth	Los Angeles	Hist. gr.	KappaAlphaTheta
A. B., Stanford, 1915.			
[2]Stone, Laura Clair	Santa Barbara	Educ. 42	33 Roble
Storck,JohnPhil.Wigge	Ft.Worden,Wn.	Greek 14	567 Lincoln-p
[1]Storke, Arthur D.	Auburn, N. Y.	Min. sp. 24	PhiGammaDel.
Storm, Hans Otto	Imperial	M. E. 50	559 Cowper-p
Stouffer, Jay Harold	Hoquiam, Wn.	Phyl. 11	2 Salvatierra
Stout, Oliver H.	Indianapolis, Ind.	Econ. 75	Sigma Alpha Ep.
Strickler, John Phillip	San Diego	Med. gr.	2418 Wash., SF-sf
A. B., Pomona, 1913.			
Strobel, Carolus Ferchen	Portland, Ore.	Econ. 13	The Greene
[2]Stuart, Annette	Mountain View	Zool. †	Mt. View-m
Stuart, Archer Bell	Palo Alto	E. E. 131	621 Gilman-p
Sturgeon, James Leonard	Monrovia	C. E. 7	92 Encina
[1]Sturges, Roger Burnside	Los Angeles	C. E. 23	Alvarado Hall
Suck, Leo Edward	Los Angeles	C. E. 12	706 Cowper-p
[2]Sullivan, Charles J.	Los Angeles	Econ.	333 Waverley
Sullivan, Daniel Henry	Eureka, Utah	C. E. 52	190 Encina
Sullivan, Owen Malachi	Portland, Ore.	PreL. 12	Phi Gamma Delta
Summerfield, Vernon Douglas	Reno,Nev.	PreL. 7	83 Encina
Supple, Albert James	South Pasadena	Phyl.-Med. 96	106 Encina
Supple, Frederic Edward	So. Pasadena	Law 79	Encina
[1]Sutherland,ArthurRaymond	San Fran.	Hist. 8	532 Homer-p
[1]Sutherland, Philip Ross	Korbel	Phyl. 4	4 Salvatierra
Suttle, Lois	Redwood City	Bact. gr.	Redwood-r
A. B., Wisconsin, 1912.			
Suydam, Clinton Hamilton	Los Gatos	M.E.51	473StaCruz,LosG-lg
Svenson, Arthur Edward	Los Angeles	Chem. gr.	1340 Bryant
A. B., Stanford, 1916.			
Swan, James Hickman	Canton, China	Phyl. 72	550 Palo Alto-p
Swarts, Clifton Ray	Hermosa Beach	Geol. 23	Alpha Tau Omega
Sweeney, John Paul	Phoenix, Ariz.	Phyl. 13	38 Encina
Sweeney, Luella	Tell City, Ind.	Hist. 81	19 Madrono
Swett, Wilber Frank	Palo Alto	Phyl. 61	1000 Forest-p
Swigart, Theodore Earl	Oakland	C. E. 77	76 Encina
Swingle, E. Margaret	Long Beach	Span. 66	25 Roble
Sylva,JosephL.Mendonca	Honolulu,T.H.	PreL. 44	635 Bryant-p
[2]Taber, Louise Relief	San Francisco	Med. gr.	2915 Calif., SF-sf
B. S., California, 1914.			

Taff, Elizabeth Simonds A. B., Stanford, 1915.	Palo Alto	Econ. gr.	628 Cowper-p
Takahashi, Matsuta	Montebello	Phyl. 10	Japanese Club
Takanashi, Taka	Stanford Univ.	Engl. 68	27 Salvatierra
Takata, Toshio	San Francisco	M. E. 51	Japanese Club
[2]Talavera, Florencio	Iloilo, P. I.	Engl.	705 Cowper-p
Talboy, Irwin Whitfield	Palo Alto	Engl. 67	311 Middlefield-p
Tanaka, Hiroichi Gr., Waseda University, 1904.	Shizuokaken, Japan	Econ. gr.	644 Emerson-p
[1]Tanner, George C.	Schuylerville, N. Y.	Chem. †3	555 Waverley-p
Tateishi, Jizaemon, A. B., Stanford, 1913.	Wakayamaken, Jap.	Econ. gr.	733 Ramona
Tatnall, Ashton Richardson	Redlands	M. E. 109	18 Encina
Taylor, Agnes Stanford	San Francisco	Engl. 48	11 Roble
Taylor, Doris Elizabeth	Reno, Nev.	Ger. 30	KappaAlphaTheta
[1]Taylor, Erna Gertrude	Los Angeles	Engl. 78	Alpha Omicron Pi
Taylor, Frank J.	Los Angeles	Engl.. 41	181 Encina
Taylor, George Harvey	Fresno	C. E. 73	19 Encina
Taylor, Gladys Lathrop	Santa Monica	Educ. 93	23 Madrono
[2]Taylor, James Edwin	Pasadena	Econ.	Alpha Tau Omega
Taylor, John Joseph	San Jose	Law †41	156 Hamilton
Taylor, Palmer Wilkinson	SantaMonica	M. E. 8	Sigma Nu
Taylor, Rowena Ellsworth	Claremont	Ger. 109	Pi Beta Phi
Taylor, Ruth Dena	Los Angeles	Graph. 18	31 Roble
Taylor, Ruth Dewey	Los Angeles	Span. 13	Alpha Omicron Pi
Taylor, Trenton Hurd	Woodland	Econ. 28	Sigma Chi
Tedford, Malcolm Edward	Santa Ana	Law 72	Delta Upsilon
Teeter, Arthur Lewis A. B., Indiana, 1911.	Monticello, Ind.	Med. gr.	2440 Calif., SF-sf
Tegner, William Evers	Laramie, Wyo.	Econ. 52	140 Encina
Teitsworth, Clark Salem	Los Angeles	Chem. 13	529 Ramona
Templeton, John Wesley	Modesto	Chem. 72	151 Addison-p
[1]Templeton, Robert Lyman	Modesto	PreL. 28	1019 Bryant-p
Templeton, Ruric Ruskin	Modesto	Geol. 89	525 Lytton-p
Tew, Marian Muriel A. B., Stanford, 1915.	Pasadena	Math. gr.	9 Roble
Thalheimer, Ulrich S.	Phoenix, Ariz.	M. E. 40	46 Encina
Thayer, Eugene Butler	Wausau, Wis.	Econ. 10	The Greene
Thayer, Rufus Gerard	Palo Alto	PreL. 12	326 Addison-p
[1]Therkelsen, Cachot	Portland, Ore.	Econ. 15	Phi Kappa Psi
Therkelsen, Mary Dorthea	Portland, Ore.	Phyl. 32	43 Roble
[1]Thomas, Bevan W.	Imperial	M. E. 9	540 University-p

Thomas, Gerald C.	Imperial	PreL. 12	559 Cowper-p
Thomas,MeganMyfanwy	R'ckSpgs.,Wyo.	Educ. 114	DeltaDeltaDelta
[2]Thomas, Lavinia	San Francisco	Hist. †	73 Roble
Thomason, Ira Leroy	Los Angeles	Law †12	195 Encina
[1]Thompson, Everett B.	Tuscola, Ill.	Econ. †5	515 Waverley
[1]Thompson, Ione G.	South Pasadena	Graph.67	KappaKappaGam.
Thompson, John Robert Gaver	Pasadena	PreL. 41	Kappa Alpha
[1]Thompson, Muriel Eliz.	Cimarron,Kan.	Hist. 90	627 Waverley-p
[2]Thompson, Richard Grant	Modesto	PreL.	1 Alvarado
Thompson,WilliamFrancis A. B., Stanford, 1911.	StanfordUn.	Zool. gr.	471 Channing
[1]Thompson,Wm.Laurence	Sullivan,Ind.	C. E.	The Alexandria-p
Thrapp, Elbridge Richardson	LosAngeles	Law †43	Kappa Sigma
Timby, Fred W.	Salt Lake City, Utah	M. E. 7	Phi Kappa Sigma
Timmins, Claude Walter	Fresno	Econ. 87	Sigma Chi
Tindall, Verne L.	Stuttgart, Ark.	M. E. 77	34 Encina
Titus, Charles Hickman	Sacramento	Hist. 13	18 Alvarado
Toda, Harold Shotaro	Oakland	M. E. †7	Japanese Club
[1]Todd, Katherine Frances A. B., Stanford, 1915.	Oakland	Zool. gr.	11 Madrono
Tognazzini, Irene Amanda A. B., Stanford, 1913.	Cayucos	Med. gr.	2321 Sacto., SF-sf
[1]Tolentino, Vicente E.	Malolos, P. I.	M. E. 1	155 High-p
Tompkins, Bernice Brooks	San Jose	Hist. 83	KappaAlphaTheta
Tourtillott, Raymond Rolland	Lindsay	Min. 14	2 Encina
Towner, Bob George	Los Angeles	C. E. 47	Acacia
Townley, Lucile	Stanford Univ.	Ger. 51	33 Salvatierra
Townsend, Thomas Harold	San Jose	C. E. 87	Kappa Sigma
Townsley, Sidney Cliffton	Holly, Colo.	Chem. 35	29 Encina
[1]Trace, Gertrude May A. B., Stanford, 1914.	San Jose	Psych. gr.	730 Univ., SJ-sj
Traphagen, Wilfred Oliver	Alameda	Econ. 10	4 Salvatierra
[1]Trefzger, John Niehaus	San Diego	M. E. †	Kappa Alpha
Tresidder,DonaldBertrand	Tipton,Ind.	Phyl. 38	13 Salvatierra
Troeger, Richard Glen	Los Angeles	Econ. †8	Alvarado Hall
Trott, Garnet Emma Ph. B., Chicago, 1911.	Keokuk, Ia.	Ger. gr.	132 S. 19th, SJ-sj
Trussell, Mary A. B., Southern California, 1913.	Escondido	Engl. gr.	Madrono
Tsuzaki, Mitsuji A. B., Stanford, 1914, A. M., 1915.	Kumamotoken, Japan	Econ. gr.	31 Salvatierra

Tuck, Joy Edwarda — Redlands — Psych. 76 — 5 Roble
[1]Tucker, Frederic Sidney — Santa Barbara — Chem. 46 — 1325 Bryant-p
Tucker, James Barnes — Provo, Utah — Law gr. — 707 Bryant-p
A. B., Cornell, 1913.
Tucker, Murray Eaton — Denison, Tex. — Chem. 85 — 144 Encina
Tufts, John Marshall — San Francisco — Phyl.-Med. 100 — Phi Kappa Psi
[1]Tulloch, Leslie Sutherland — Kohala, T.H. — Zool. gr. — 5 Salvatierra
A. B., Stanford, 1914.
[1]Tully, Wilford Hamilton — San Jose — Law gr. — 142 Encina
A. B., Stanford, 1915, J. D., 1916.
Turley, Joseph Soll — Berkeley — Educ. †20 — 543 Byron-p
Turner, Madeleine McCrea — San Fran. — Hist. gr. — Kappa Kappa Gam.
A. B., Stanford, 1916.
Turner, Mildred Hahmann — Santa Rosa — Educ. 45 — 66 Roble
Turner, Muriel Emily — Palo Alto — Math. 105 — Alpha Omicron Pi
Turpin, Jere — San Diego — Span. gr. — 431 Kipling-p
A. B., Stanford, 1912.
Tweed, Charles Henry, Jr. — Hayden, Ariz. — Phyl. 11 — Encina
Twohy, Philip Joseph — Spokane, Wn. — Econ. 61 — Delta Kappa Ep.
Tyrrell, Clarence Ellis — San Francisco — Math. 11 — 333 Waverley-p
Uhl, Gretchen Elisabeth — Monrovia — Ger. 82 — Delta Delta Delta
[2]Uhler, Chester Richards — Palo Alto — Chem. † — 405 Emerson-p
Ulrey, Dayton — N. Manchester, Ind. — Phys. gr. — Ravenswood
A. B., Indiana, 1911, A. M., 1912.
Upp, Daniel Curtis, Jr. — Dawson, Canada — Greek 32 — 11 Salvatierra
Urban, Joseph Charles — Ukiah — Geol. 75 — Sigma Alpha Ep.
[2]Vanderburg, Chester Marion — Madera — Med. gr. — 2102 Calif., SF-sf
A. B., Stanford, 1915.
Vandervort, Charles Thomas — Santa Cruz — Law 65 — 604 Gilman
Vandervort, Lynnette — Fond du Lac, Wis. — Psych. gr. — Kappa Kap. Gam.
A. B., Stanford, 1916.
Van der Wolk, Emil Wm. — Sp'gfield, Mass. — C. E. 8 — Kappa Alpha
Van Etten, Ilza Katrine — Palo Alto — Hist. gr. — 465 Hawthorne-p
A. B., Stanford, 1915.
Van Every, Dale Byron — Colton — PreL. 45 — 56 Encina
Van Gorden, Horace Jerome — Palo Alto — Econ. 46 — 535 Everett-p
[1]Van Liew, Rachel — Chittenden — Hist. — Madrono
Van Pelt, Reuben Griffith — Los Angeles — Chem. 59 — 11 Salvatierra
Van Pelt, Ruth — Los Angeles — Math. 58 — 1057 Ramona-p
[1]Van Zwalenburg, Marian J. — Riverside — Hist. 122 — Delta Delta Delta
A. B., Stanford, 1916.
Vaudoit, Paul Louis — San Luis Obispo — Phyl. 36 — 151 Encina

Vaughan, Marion Melinda	LosAngeles	Hist. 104	DeltaDeltaDelta	
Veale, Mortimer Belshaw	Martinez	Law 66	11 Encina	
Venard, William John	Palo Alto	Econ. gr.	411 Waverley-p	
A. B., Stanford, 1916.				
Viau, Benjamin Harrison	Sanger	Med. gr.	2462 Clay, SF-sf	
B. S., California, 1912.				
Vickery, Robert Kingston	Saratoga	Ent. 111	101 Encina	
Vincenz, Jean Lacey	Fresno	C. E. 38	19 Salvatierra	
[2]Vrang, Minna Christine	San Rafael	Zool. 57	Alpha Omicron Pi	
[1]Wade, Wilson R.	Las Cruces, N. M.	C. E. sp. 13	550 PaloAlto-p	
Wagener, Willis Westlake	Ceres	Bot. 56	375 Everett-p	
Wagner, Carl Ernest	San Francisco	PreL. 11	25 Salvatierra	
Wagner, Elizabeth Dorothea	San Jose	Educ. gr.	355 Reed, SJ-sj	
A. B., Stanford, 1916.				
Waite, Herbert Eugene, Jr.	Stockton	PreL. 14	PhiGammaDelta	
Waite, Howard Edgerly	Riverside	M. E. 76	7 Encina	
Wakefield, Cecil Ray	Fresno	Law 107	16 Salvatierra	
Walbridge, Thos. Alexander	Toledo, O.	Econ. 82	545 Forest-p	
Waldo, Herbert S.	Kalamazoo, Mich.	Engl. †8	969 University-p	
Waldo, John Henderson	Pasadena	PreL. 12	AlphaTauOmega	
Walker, Frank Fish	San Francisco	PreL. 33	127 Encina	
Walker, Gladys Lucile	Monrovia	Engl. 75	Sigma Kappa	
Walker, Loran Stiles	Palo Alto	Phil. sp. 67	117 Cowper-p	
[1]Walker, Louis Oliver	Boise, Ida.	M. E. 20	Mountain View	
Walker, Robert Bruce S.	San Jose	Math. 78	342 S. 15th, SJ-sj	
Wallace, Helen	Visalia	Hist. gr.	KappaKappaGam.	
A. B., Stanford, 1915.				
[2]Wallace, Helen Margaret	Lincoln, Neb.	Lat. gr.	16 Madrono	
A. B., Nebraska, 1913.				
Wallace, James McOuat	Palo Alto	PreL. 75	483 Hawthorne-p	
Wallace,Jas.S.	Lethbridge,Alberta,Can.	PreL. 25	Chi Psi	
[1]Wallace, William Harry	Palo Alto	Engl. 2	120 Waverley	
Waller, Lawrence Waite	San Francisco	Econ. 42	Alvarado Hall	
Walls, Eleanor Prescott	Los Angeles	Hist. gr.	Delta Gamma	
A. B., Stanford, 1915.				
Walsh, Dorothy Leeds	Burlingame	Engl. 14	KappaAlphaTheta	
[1]Ward, Harold Lee	Orchard Lake,Mich.	Fr. 9	25 Salvatierra	
Ware, John Sandford	Durango, Colo.	M. E. 12	18 Alvarado	
[2]Waring, Ethel Bushnell	Oakland	Educ. gr.	45 Linda, Oak.-o	
A. B., Illinois, 1908.				
Wark, Thomas Leslie	Long Beach	Econ. 16	Beta Theta Pi	

Warn, William Otto	Spokane, Wn.	Econ. 12	Phi Kappa Psi
Warnock, Archibald Wilson	Palo Alto	Zool. 45	634 Hamilton-p
Warren, Arthur Fulton	San Jose	Phyl. 12	245 S. 12th, SJ-sj
Warren, Henry Blodgett	Los Angeles	C. E. †13	305 Cowper-p
Warren, Lansing	Los Angeles	Engl. 82	305 Cowper-p
Warren, William Halford A. B., Stanford, 1915.	Glendora	M. E. gr.	145 Encina
Wass, Warren H.	Santa Barbara	C. E. 50	185 Encina
Waterman, Wilhelm Hallett	San Fran.	Engl.. 64	Cardinal Club
Waters, Ernest Gilbert	San Francisco	C. E. 133	65 Encina
Watson, Harold G.	Los Angeles	Econ. †16	Beta Theta Pi
Watson, Leslie James	Sunnyvale	C. E. 36	Sunnyvale-s
Watts, Frank Albert	East San Gabriel	C. E. 10	Theta Xi
Waugh,ClarenceWendell A. B., Stanford, 1915.	Brooklyn,N.Y.	Educ. gr.	22 Lasuen
Weatherford, Harold L.	Chicago, Ill.	Zool. 107	146 Encina
[1]Weaver, Henry	Sacramento	M. E. 5	531 Lytton-p
Weaver, Landis Osburn	Fresno	PreL. 10	720 Waverley-p
[1]Webb, Florence Lisle A. B., Stanford, 1916.	Park City, Utah	Engl. 120	DeltaDeltaDelta
Webb, Morgan Chofield	Merced	Hist. 100	656 Bryant-p
Weber, Harold Davis	Los Angeles	Econ. 76	79 Encina
Webster, Beatrice	Los Angeles	Math. †12	11 Madrono
Wedekind, Richard Eldon	Chico	PreL. 11	81 Encina
Wedel, Peter J. A. B., Kansas, 1895.	Newton, Kansas	Chem. gr.	804 Bryant-p
[2]Weeks, Foster William	Oakland	Econ. 14	170 Bryant-p
Weeks, Pearl May	Pasadena	Phys. 113	1013 Ramona-p
Weil, Alita	Sacramento	Hist. 9	2 Lasuen
Weiler, George Offerman	Victoria, B. C.	M. E. 14	Phi Kappa Psi
Welch, Josephine	Colusa	PreL. 46	Pi Beta Phi
Welch, Robert Johnson	Oakland	PreL. 47	Beta Theta Pi
Welday,SamuelOliver A. B., Ohio University, 1912.	Bloom'gdale,Ohio	Educ. gr.	TheAlexandria-p
Welker, Benjamin Lee, Jr.	San Diego	M. E. 10	4 Salvatierra
Welling, Ralph	Chicago, Ill.	Econ. 5	Sigma Chi
[2]Wellington, Arthur Boole	Sacramento	C. E.	706 Cowper
Wells, Alice Colby	Hollywood	Fr. 15	Madrono
Wemra, Seitarow	San Francisco	M. E. 66	1101 Emerson
Wenzel, Robert Nicolas	St. Louis, Mo.	Chem. 121	51 Encina
Werba, Peter Cyril	Palo Alto	Phyl. †6	426 Homer-p

West, Frank Gordon	Santa Ana	PreL. 14	375 Everett	
West, Z. Bertrand, Jr.	Santa Ana	Law 69	71 Encina	
Westenhaver, Chas. Ewing	Vanc'r, B. C.	PreL. 47	Delta Chi	
Westenhaver, Robt. Edward	Vanc'r, B. C.	PreL. 49	Delta Chi	
Westerman, Helen	Oakdale	Econ. 63	36 Roble	
Wetherby, Christine	Pasadena	Ger. 14	KappaKappaGam.	
Wetzler, Sydney	Los Angeles	Engl. 7	660 Waverley-p	
Weymouth, Frank Walter	Stanford Un.	Zool. gr.	3 Salvateirra	
A. B., Stanford, 1909, A. M., 1911.				
Wharton, James Melvin	Portland, Ore.	Econ. 8	352 Middlefield-p	
Whealton, Rowland Gardiner	Long B'ch	Min. 14	Kappa Alpha	
Wheatly, Winston Rogers	Los Angeles	Law 54	Kappa Sigma	
Wheeler, Chas. Edward	Milwaukee, Wis.	Geol. 131	42 Encina	
[1]Wheeler, Francis Foss	Milwaukee, Wis.	Law gr.	42 Encina	
A. B., Stanford, 1915.				
Wheeler, Oliver Percival	Petaluma	Econ. 43	334 Lincoln	
Whitaker, Wesley R.	Oakland	Law gr.	167 Encina	
A. B., Stanford, 1915.				
White, Charles Eldon	Palo Alto	Chem. 13	604 Everett-p	
White, Fred Ferrell	Marion, Ill.	Law 104	Cardinal Club	
[2]White, Lewis Edmund	Redding	Educ. 58	Theta Xi	
[2]White, Ramona Elizabeth	Burlingame	Zool.	Burlingame-b	
Whitmer, Aaron Aylsworth	Portland, Or.	PreL. 12	Zeta Psi	
Whitten, Lester Clark	Spokane, Wn.	Hist. 106	Delta Tau Delta	
Wickersham, Newton W.	Los Angeles	Geol. 106	Kappa Sigma	
Widell, Berndt Alexis	Fort Ruger, T.H.	M. E. 74	167 Encina	
Wight, Luetta Curtis	San Anselmo	Hist. 9	52 Roble	
[1]Wilbur, Harry Rueben	San Gabriel	M. E. 22	334 Lincoln	
Wilcox, Chester Arthur	Long Beach	PreL. 14	Chi Psi	
Wilcox, Lorene	Rio Vista	Educ. 89	Gamma Phi Beta	
Wilcox, Robert William	Delta, Colo.	Med. gr.	1939 Clay, SF-sf	
A. B., Stanford, 1913.				
Wilent, Charles Edward	RedwoodCity	Law unc. 5	RedwoodCity-r	
Wilkie, Alfred Daniel	Los Angeles	Engl. 40	Delta Tau Delta	
Wilkie, Laura Elizabeth	San Francisco	Ger. 63	Alpha Omicron Pi	
Wilkie, LonnieHouston	DawsonSpgs., Ky.	Engl. 48	718 Bryant-p	
Wilkins, Earl Brander	San Francisco	Law 60	Phi Gamma Delta	
Wilkinson, Frank Royal	Riverside	Geol. 6	Kappa Alpha	
[1]Will, Elsa Barbara	Rochester, N. Y.	Med. gr.	Lane Hosp., SF-sf	
A. B., Stanford, 1913, M. D., 1916.				
Willard, Nancy Lee	Los Angeles	Hist. 62	KappaAlphaTheta	

Williams, Alice Whitney	Los Angeles	Chem. 47	62 Roble
Williams, Ben Charles	Los Angeles	C. E. 108	AlphaTauOmega
Williams, Buford	Vinita, Okla.	Econ. 91	7 Encina
Williams, Carl Francis	Los Angeles	M. E. 104	156 Encina
Williams, Ernest Elias	San Jose	Law 82	152 Viola, SJ-sj
Williams, Fleta Hazel	Higginsville,Mo.	Chem. 61	324 Emerson-p
Williams, J. Harold	Ainsworth, Neb.	Educ. gr.	5 Cabrillo
A. B., Stanford, 1913, A. M., 1914.			
Williams, Paul Langdon	Los Angeles	Econ. 81	Cardinal Club
Williams, Philip Samuel	Ontario	Chem. 14	351 Homer
Williams, Robert Tatman	Quincy, Ill.	Engl. 46	Cardinal Club
Williamson, Frederick W.	Los Angeles	Chem. 15	Cardinal Club
Williamson, Joseph Fredk.	Sebastopol	M. E. 48	161 Encina
Williman, Edwin	Menlo Park	Engl. sp. 99	MenloPark-m
[2]Willis, Cornelius Grinnell	StanfordUn.	M. E.	5 Lasuen
Wilson, Arthur Francis	Hollister	C. E. 46	185 Encina
Wilson, Frances Hamrick	Berkeley	Law gr.	Chi Omega
A. B., California, 1915.			
Wilson, Paul R.	Stanford Univ.	Law sp. 88	153 Encina
Winans, Henry Morgan	Denver, Colo.	Phyl.-Med. 108	305 Cowper
Wing, Robert Lewis	Palo Alto	C. E. 48	345 Lincoln-p
Wingood, Elsie Katharine	Santa Ana	Span. 87	Sigma Kappa
Winham, Edgar Snyder	Salinas	C. E. 10	Delta Upsilon
Winham, William Pitt Leroy	Salinas	C. E. 9	Delta Upsilon
Winters, Nove McCullough	Quincy, Ill.	Law unc. 38	AlvaradoHall
Winters, Victor DeWitt	Quincy, Ill.	PreL. 35	Alvarado Hall
Wise, David Clarence	Carthage, Mo.	Chem. 35	29 Encina
[1]Wiseman, Philip Kenneth	Los Angeles	Geol.	Beta Theta Pi
Wislizenus, Lucy Carvell	Los Angeles	Lat. 13	87 Roble
Witherbee, Harold Rhody	Los Angeles	Phil. 14	16 Alvarado
[1]Witherell,OttoSoutherland	Hollywood	Econ. 9	Phi Kappa Sigma
Withers, Grace Agnes	Edenvale	Educ. 87	11 Roble
Wohlford, Burnet Coleman	Escondido	Econ. 44	18 Alvarado
Wohlford, Mary Katharine	Escondido	Econ. 11	5 Madrono
Wolf, Leslie Milton	San Diego	Geol. 82	Phi Kappa Psi
Wolff, Kenneth Lloyd	San Fernando	Bot. 11	707 Bryant-p
Wolff, Martha Frances	San Francisco	Math. gr.	AlphaOmicronPi
A. B., Minnesota, 1914.			
Wolford, Catlin	Portland, Ore.	PreL. 46	Beta Theta Pi
[1]Wolverton, Sarah Foss	Palo Alto	Engl. gr.	Castilleja School
A. B., Colorado, 1904, A. M., 1905.			

[2]Womack,DorothyL.	Minneapolis,Minn.	Econ. †27	GammaPhiBeta	
Wong, Ralph Buck-hond	Canton, China	C. E. 128	405 Emerson-p	
Wong, Shiu Kei	Canton, China	Econ. 15	415 Lytton-p	
Wood, Abbie Elvenia	Palo Alto	Econ. 41	AlphaOmicronPi	
Wood, Ann Margaret	Escondido	Hist. gr.	4 Madrono	
A. B., Stanford, 1916.				
Wood, Dorothy Augusta	Palo Alto	Med. gr.	2402 Calif., SF-sf	
A. B., Stanford, 1915.				
Wood, Elizabeth Compton	Palo Alto	Econ. 40	AlphaOmicron Pi	
Wood, Grace Mary	Mayfield	Fr. 75	Mayfield-m	
Wood,Jas.T.,Jr.	WhiteSulph.Spgs.,Mont.	Geol. 41	Delta Upsilon	
Wood, James Vincent	Pacific Grove	Econ. 104	PhiKappaSigma	
Wood, Jessie Ida	Mayfield	Bot. gr.	Mayfield-m	
A. B., Stanford, 1915.				
[1]Wood,WarrenBale	So.Bellingham,Wn.	Econ. †3	PhiGammaDelta	
Wood, William Farlin	Mayfield	M. E. 15	Mayfield-m	
Woods, Marcy Smith	San Francisco	Phil. sp. 26	21 Salvatierra	
Woodward, Violette Olivia	Santa Clara	Chem. 42	1358 S. C., SC-sc	
Worden, Waldo Stephen	San Jose	Educ. 71	41 S. River, SJ-sj	
Wormser, Paul	San Francisco	E. E. 130	65 Encina	
Worth, Frederick Noyes	San Francisco	Econ. 100	Cardinal Club	
Worthy,ArthurEdwin	HuntingtonBch.	Hist. gr.	191 Encina	
A. B., Stanford, 1915.				
Worthy, Elmer Thomas	Santa Ana	Law gr.	23 Encina	
A. B., Stanford, 1914.				
Wright, Bryan Lyon	Ogden, Utah	Econ. 11	4 Alvarado	
[2]Wright, Carrie Della	Colchester, Vt.	Ger. gr.	Mayfield	
A. B., Smith, 1910.				
Wright, Catherine Louise	Pasadena	Fr. 43	Kappa Kappa Gam.	
Wright, Edward Augustine	LosAngeles	C. E. 9	18 Alvarado	
Wright, Ernest Neall, Jr.	Pasadena	Geol. 81	Phi Gamma Delta	
Wright, Fay Linton	Santa Ana	M. E. 12	Theta Delta Chi	
Wright, Faye	Hanford	Hist. 83	51 Roble	
Wright, Harold H.	Los Altos	Min. 15	Los Altos-l	
Wright, Margaret Clara	Los Altos	Econ. 4	11 Madrono	
Wright, Paul Lyon	Ogden, Utah	Econ. 6	4 Alvarado	
[1]Wrightsman,CharlesB.	NewYork,N.Y.	Econ. 32	Delta Kappa Ep.	
Wuesthoff, Herbert C.	Milwaukee,Wis.	PreL. 51	Delta Tau Delta	
Wulff, Horace Byington	Sacramento	PreL. 13	Phi Kappa Sigma	
Wurzweiler, Milton A.	Portland, Ore.	Econ. 10	The Greene	
Wyckoff, Harry Alphonso	San Fran.	Med. gr.	639 35th, SF-sf	
A. B., Stanford, 1907.				

[1]Wylie, James Thomas	Auckland, N. Z.	Geol. sp. 41	SigmaAlphaEp.
[1]Yamada, Sosabro	Sendai, Japan	Phyl.-Med.120	JapaneseClub
A. B., Stanford, 1916.			
Yasutake, Jack Kichiro	Stanford Un.	M. E. sp. 13	Japanese Club
Yewell, Paul Ridout	Los Angeles	Min. 75	Encina
Yoder, Olive Lillian	Los Angeles	Hist. 105	DeltaDeltaDelta
York, Duke Alexander	Deming, N. M.	Econ. 11	235 Emerson-p
York, Ralph Wallace	Boise, Ida.	Econ. 9	College Terrace
Young, Alfred Carter	Honolulu, T. H.	Law gr.	Beta Theta Pi
A. B., Yale, 1915.			
[2]Young, Isabelle Gibson	Albany, Ore.	Hist.	707 Melville-p
Zabel, Edwin Adolf	Seattle, Wn.	Ger. 106	Veblen Cottage
Zacharias, George W.	Enid, Okla.	Geol. 58	Delta Upsilon
Zane, Neil Clinton	Woodland	Econ.sp.10	PhiGammaDelta
Zeidler, Evan Verle	Rockwell, Ia.	PreL. 15	660 Waverley-p
Zeidler, Richard	Palo Alto	Educ. gr.	720 Cowper-p
Ph. B., Wisconsin, 1906; M. L., California, 1912.			
Zimmerman, Howard K.	Salem, Ore.	Law gr.	59 Encina
A. B., Oregon, 1913.			
[1]Zinno, Donato	Naples, Italy	Chem. †	Menlo Heights
Ziser, George J.	Los Angeles	Chem. gr.	178 Encina
A. B., Stanford, 1915.			
[2]Zook,ClarenceVincent	Sunnyside,Wn.	Econ.	347 Ramona-p
Zvenigorodsky,Abraham	NewYork,N.Y.	Hist. 97	1329 Waverley-p
[2]Zwingman, Charles C.	New Haven,Ct.	Econ. †	Phi Gamma Delta

SUMMER SESSION, 1915

Field Geology

Beeson, Joseph Josiah
Clarke, James P., Jr.
Hawley, Henry James
Hobson, Harry Townsend
La Peire, George Warren
Loel, Wayne Frederick
Lyman, George Byron
McKenna, John Shore
McKenzie, Andrew Nicholls
Malm, Walter R.
Niebel, Herbert Lee
Nisbet, John McHenry
Reeves, Frank Wixom
Scott, Walter Winthrop
Sharp, Leslie Harrison
Siemon, Frederick

Marine Biological Laboratory

Arnold, Clement Harisse
Barker, Earle Wright
Bevan, Charles Frederick
Burbank, William Freeman
Butterfield, David Rowland
Chace, John Derrol
Clark, Laura Elizabeth
Copeland, Ruth McArthur
Cowgill, George Raymond
Daniel, Meta Caroline
Ellis, Leland Wadsworth
Ellsaesser, Fred
Field, William Richards
Gray, John
Huxtable, Howard Homer
McConnell, Mary Emma
McCue, Gladys Ethel
Metz, Dorothy Amanda
Mills, Zetta Mabel
Nagel, Gunther W.
Paulsen, Jasper William
Peterson, Helen Myranda
Philip, Charles Whipple
Sierk, Herbert
Simonds, Sarah Louise
Tucker, Murray Eaton
Warnock, Archibald Wilson
Whitten, Lester Clark

Law

Baruch, Frederick
Black, Floyd Davidson
Borde, Harry Joseph
Burbank, William Freeman
Chace, John Derrol
Close, Carlos Cooper
Cook, Edward I.
Davis, Charles Skinner
Denhart, Harry John
Erb, Arthur Leslie
Flack, Augustus Sloan
Grindeland, I. A.
Hastings, Harlow H. A., Jr.
Heald, Elmer Wilson
Johnston, Faber Laine
Lachmund, Ralph Henry
Lewis, Walter Kinney
McDowell, Herbert
McNair, Jerome Willis
Miller, Clinton McPherson
Morton, Oakley Kendall
Nichols, Bernard Charles
Partridge, Joseph Arlington
Paul, William Glae
Pratt, Eugene Elliot
Ross, George Paul
Sharp, Sidney J. W.
Stever, Robert Frederick
Tully, Wilford Hamilton
Wheeler, Francis Foss
Whitaker, Wesley R.
Wilson, Frances Hamrick

SUMMARIES

Officers

Trustees		15
Academic Council—rank of		
Professor	62	
Associate Professor	27	
Assistant Professor	36	
Total (less 7 absent on leave)		118
Other Teaching and Administrative Officers—rank of		
Emeritus Professor	4	
Professor	7	
Clinical Professor	8	
Associate Clinical Professor	4	
Assistant Professor	14	
Assistant Clinical Professor	2	
Lecturer	3	
Instructor	46	
Clinical Instructor	17	
Total (less 6 absent on leave)		93
Assistants:		
Administrative	7	
Departmental	34	
Medical School	33	
Library	7	
Total (counting half-year assistants ½ each)		74

Students

		1st sem.	2d sem.	For the year
Graduates		297	297	342
Candidates for Degree of A. M.	99			
Candidates for Degree of Engineer	18			
Candidates for Degree of J. D.	50			
Candidates for Degree of M. D.	78			
Candidates for Degree of Ph. D.	20			
Other Graduate Students	77			
Undergraduates		1702	1616	1787
Special Students		65	55	70
Total		2054	1968	2199

Summer Registration	76	
Less names already counted	63—	13
Total for the year (including Summer Registration)		2212

By Major Subjects

	Graduate	Undergrad.	Special	Total
Greek	3	14	—	17
Latin	13	10	—	23
Germanic Languages	14	35	—	49
Romanic Languages	11	50	1	62
English	31	142	7	180
Philosophy	—	2	2	4
Psychology	2	9	—	11
Education	21	66	2	89
History	26	119	1	146
Economics	14	262	9	285
Law—Professional	50	131	9	407
—Pre-Legal	—	214	3	
Graphic Art	2	16	—	18
Mathematics	7	24	—	31
Physics	4	5	—	9
Chemistry	14	112	3	129
Botany	5	21	1	27
Physiology and Histology	—	106	6	112
Anatomy	—	—	1	1
Bacteriology	2	2	—	4
Pharmacology	1	—	—	1
Zoology	8	17	—	25
Entomology	5	20	—	25
Geology and Mining	8	104	5	117
Civil Engineering	11	118	10	139
Mechanical Engineering	8	175	10	193
Electrical Engineering	4	7	—	11
Medicine	78	†18	—	†96
Total				†2211

†Also registered as Physiology majors, 12.

By Residence

California	1610	Arkansas	3
Oregon	82	District of Columbia	3
Washington	52	Oklahoma	3
Utah	36	Tennessee	3
Arizona	34	Alaska	2
Colorado	33	North Dakota	2
Illinois	23	Vermont	2
Iowa	23	Alabama	1
Idaho	21	Delaware	1
Ohio	19	Kentucky	1
Montana	18	Maryland	1
Nevada	18	Mississippi	1
New York	15	North Carolina	1
Minnesota	14	Canada	15
Missouri	14	Japan	13
Indiana	13	China	10
Nebraska	12	Australia	2
Pennsylvania	12	India	2
Wisconsin	11	Italy	2
Hawaii	10	Mexico	2
Wyoming	9	Brazil	1
Kansas	7	England	1
Massachusetts	7	Germany	1
Philippine Islands	6	Holland	1
Michigan	5	New Zealand	1
New Mexico	5	Russia	1
Connecticut	4	Scotland	1
South Dakota	4	South America	1
Texas	4		
		Total	2199

ALUMNI ASSOCIATION

[Organized June 15, 1892]

CONSTITUTION

(As amended, 1908-14)

IN order to promote the interests of the University, to secure unity among its graduates, and to foster an attachment to our *Alma Mater,* we do hereby constitute ourselves an association to be known as the Alumni Association of the Leland Stanford Junior University.

I. MEMBERSHIP

1. All persons who have received a degree from the Leland Stanford Junior University are members of this Association.

2. All members of the Faculty are honorary members of this Association.

II. OFFICERS

1. The officers of this Association shall be: (1) a President; (2) a Vice-President; (3) a Secretary-Treasurer; (4) an Executive Committee consisting of the Secretary-Treasurer and four other elected members, one of whom shall be designated as Chairman, but the President shall not be a member of the Committee; and (5) an Advisory Board, consisting of the President, one representative elected by the graduating class for the term of one year, and nine elected members who shall be graduates of five years' standing, and who shall be elected for three-year terms. . . . The Advisory Board shall elect its President and Secretary.

2. All other officers shall serve for one year or until their successors are elected.

III. DUTIES OF OFFICERS

1. It shall be the duty of the President to preside at all business meetings of the Association, to deliver the President's address on Alumni Day, and to perform such other duties as usually belong to his office.

2. It shall be the duty of the Vice-President to preside in the absence of the President and to perform the other duties belonging to his office.

3. It shall be the duty of the Secretary-Treasurer to keep accurate

minutes of the meetings of the Association and to act as Secretary of the Executive Committee, of which he shall be a member.

4. It shall also be the duty of the Secretary-Treasurer to have charge of the collection and disbursement of the funds of the Association.

5. The Secretary-Treasurer shall be allowed ten per cent of all dues or assessments collected, as compensation for his services.

6. It shall be the duty of the Executive Committee to arrange for the program to be presented on Alumni Day; or any programme for other public occasions; to regulate the finances of the Association; to perform such other duties as may be imposed upon it; and to attend to all business of the Association not otherwise provided for.

7. It shall be the duty of the Advisory Board, when deemed advisable, to consult alumni, undergraduates, faculty, and trustees, and to make recommendations regarding the welfare of the University and of the Alumni Association.

IV. COMMITTEES

1. The President shall be ex-officio a member of all Committees, except the Executive Committee.

2. At each annual business meeting the President shall appoint a committee of two persons to audit the Treasurer's accounts.

V. ELECTIONS

1. The February issue of the *Alumnus* shall give notice of the annual nomination and election of officers of this Association. Said notice shall contain the names of the incumbent officers and shall indicate the hold-over members of the Advisory Board, and shall contain in full the provisions of this Constitution relating to nominations and elections.

2. Nominations in writing, signed by at least twenty members, shall be required for any nomination. Nominations shall be forwarded to the Secretary-Treasurer between the first day of February and the first day of April of each year. On or before the fifteenth day of April of each year, the Secretary-Treasurer shall mail to every member of this Association, whose address he knows, an official ballot containing all the nominations, with the addresses of the nominees and the number of proposers of each, and said ballot shall be published in the May issue of the *Alumnus*.

3. Officers shall be elected at an annual election to be held at Stanford University on Alumni Day, between the hours of nine o'clock A.M., and twelve o'clock noon. The Executive Committee shall have charge of the election. The elector may cast a written ballot in person, or by mail addressed to the Secretary-Treasurer, marked "Ballot" and

disclosing the sender's name, and enclosing a ballot in a plain envelope. Ballots so received shall be opened and cast only during the hours of election. The respective candidates receiving the highest number of votes shall be declared elected. A tie vote shall be decided by lot.

4. No one whose annual dues are in arrears for the current year shall be entitled to vote or to hold office.

VI. DUES

The dues of the Association shall be $1.25 per year for each member thereof, which amount shall include a subscription to the *Alumnus*.

Provided, however, that all members who, prior to May 1908, have paid $5.00 shall be exempted from further dues.

VII. MEETINGS

Meetings of the Association may be called by the President or by petition of twenty members, said meetings to be held at Stanford University.

VIII. AMENDMENTS

Any proposition to alter or amend these Articles of Association must be proposed in writing, signed by twenty members, and submitted to the members by mail in printed form by the Secretary-Treasurer, and voted upon in the same manner as are nominations for officers, and adopted by a majority vote.

OFFICERS OF THE ASSOCIATION, 1915-16

President—LELAND WHITMAN CUTLER, '06.

Vice-President—Miss ELIZABETH AGNES WRIGHT, '08.

Secretary-Treasurer—JOHN EZRA MCDOWELL, '00.

Executive Committee—CHRISTOPHER MASON BRADLEY, '01, Chairman; BARTON WOODFORD CRANDALL, '07; FRANCIS LOUIS GUERENA, '11; ROBERT W. WILCOX, '13; JOHN EZRA MCDOWELL, '00.

Advisory Board—Mrs. MAY HURLBURT SMITH, President; JOHN THOMAS NOURSE, '00; THOMAS MARION WILLIAMS, '97; Mrs. JESSIE MCGILVRAY TREAT, '07; GILBERT DENISON BOALT, '03; ELMER GEORGE BRUA, '04; WALTER RALEIGH HAMILTON, '02; STANLEY STODDARD SIMONSON, '16; LELAND WHITMAN CUTLER, '06; JOHN EZRA MCDOWELL, '00; DANIEL WELLMAN BURBANK, '09, Secretary.

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Athletic Fields
Hall
Kellogg Ave
Church St
Broadway
Main St
Park Boulevard
St Deborah
Elm St
Maple St
Walnut St
Cherry St
Pine St
Oak St
Spruce St
Birch Lane
Ash St
Willow St
Cedar St
Hickory St
Chestnut St
Poplar St
Sycamore St
Dogwood St
Magnolia St
Hawthorn St
Laurel St
Juniper St
Cypress St
Redwood St
Sequoia St
Palm St
Fir St
Pine Ave
Oak Ave
Elm Ave
Maple Ave
Walnut Ave
Cherry Ave
Birch Ave
Ash Ave
Willow Ave
Cedar Ave
Hickory Ave
Chestnut Ave
Poplar Ave
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Redwood Ave
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Palm Ave
Fir Ave